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ABSTRACT

This document contains the full transcript of a 2-day workshop on library automation. The first day of the workshop was devoted to a review of the state-of-the-art of library automation and the second day included presentation of testimony by Maine librarians. The transcript of the first day includes discussions of the historical development of library automation; growth of the for-profit information sector; library standards; studies of online catalog use; automated circulation systems; online catalogs; microcomputers and software programs; cost considerations; copyright; retrospective conversion; online searching; and library networks, as well as an extensive question and answer session. The second half of the document includes more questions and answers and official testimony from participants representing libraries throughout the state of Maine. (THC)

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MAINE STATE LIBRARY

Transcription of an Automation Workshop

Held September 17, 1984

and

A Public Hearing Regarding Library Automation

Held September 18, 1984

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Gary Nichols, Maine State Librarian:

I'm very pleased that we have the turnout that we have and the well mix of libraries, of course, that are represented and it's my great pleasure. I think this is a rather historic occasion for all of us, to be able to introduce to you Susan Baerg Epstein. Susan is a resident of Costa Mesa, CA, who is a well-known and well-renowned library management and automation consultant who was really a pioneer in the business. She has been doing this, involved in retrospective conversion and COM catalogs and what not, automation activities for the last ten years. So she really is a pioneer in this effort and has worked with many state library agencies throughout the country, in particular, those that are concerned with developing, such as we are here, a state-wide network with multitype libraries and with the objective of resource sharing. She's worked here in New England with the Connecticut State Library, with the Colorado State Library, Hawaii, Wisconsin and California, her home state, and in many other states doing specialized papers on management and library automation. Susan is also a regular columnist for Library Journal and I'm sure many of you have read her articles on library management and automation in Library Journal.

Susan has a B.A. degree from Wellesley and she has her M.L.S. from Immaculate Heart in Los Angeles. She's worked in public libraries as a special assistant to the county librarian for Los Angeles County Public Library and has worked as Assistant City Librarian for the Huntington Beach Public Library in Huntington Beach, CA and she's worked as a system analyst and programmer for such firms as IBM, Control Data, and for Harvard University.

So it's with great pleasure that we bring Susan with you this morning. She'll be imparting information to you and I think she will provide a question and answer period, too. But most of the information will be flowing to you. Tomorrow we'll reverse that process and hopefully I will see all of you again tomorrow to return some information to Susan.

One of the things that we're most impressed with with Susan's RFP to us for the automation study was the fact that she did appear to have a sensitivity for the rural environment and also at the same time we had some assurance from her proposal that we wouldn't get a little snip and a little piece from Connecticut and a little from Hawaii and put it together as the Maine Report. I think it will be reflective of your interests as we proceed in planning for automation and to make that, of course, effective we really need your commitment to return information to Susan. If you can't make it tomorrow, we certainly would welcome having your written testimony. Susan will return again and we'll have an opportunity to meet with her. Some groups have already arranged that in October. Please do try to come back tomorrow. We are deeply interested in hearing from you.

We had a meeting of the Automation Committee yesterday and if you

were to ask have we any predetermined thoughts in this area of automation, I would say some, yes, painted in a broad, general context in terms that we all have, judging by your attendance, of course, an interest and a commitment to move ahead in the automation area. We have the atmosphere, we felt, and I have felt for a long time, in Maine, that makes cooperation of automation an easy task here in Maine. We have a long tradition here in Maine of really unselfish cooperation and that's indicative of a sharing that you have all participated for through the Regional Library Systems, through the working with the University of Maine in Orono, Bowdoin, Bates, Colby. These institutions are givers and are not necessarily always expecting something to receive in return. So I think that the cooperative atmosphere is right.

We certainly are looking forward to something that's compatible with all of our interests, compatible technologies, so we don't really take away from the very successful efforts that we have now, in particular with the Inter-Library Loan through the regional library system. I think that it is important to include as many people in this effort as we possibly can within some economic sense of realities here. We're hoping, of course, that we can have our effort done in time to present to the next session of the Legislature. I'm looking forward to that.

So, let me do this too, there are several members here on the Automation Committee. I would like to do this, if you don't get a chance to talk to Susan in a more personal way, or if you can't come back tomorrow and somehow you don't connect with Susan, you can bring your thoughts, if not to me, certainly to the members of the Automation Committee who might be in your area. So I'd like those people to identify themselves so you'll know who they are, in case you want to exchange some information with them. Those of your who are here, would you do this, briefly just stand and give your name and what interests you represent. Start right here with Karl:

[Members of the Automation Committee who were present introduced themselves.]

Nichols:

Susan, if you're more comfortable, I don't know, I won't tell you how to do this, this traveling microphone you may want to move around in some other area. A housekeeping announcement, No smoking. Lunch is in the Augusta Capital Pinetree Room, North Wing. Tomorrow's meeting is in the State Office Building, Room 113, and we're sorry we had to move locations on you, but they're booked and overbooked here, but we do have to switch tomorrow's meeting to the State Office Building, Room 113. There is a parking garage in the rear of the State Office Building, so I don't think parking will be a problem to you. Now, I'll turn you over to Susan. Thank you.

Susan:

Good morning. I'm very glad to be here. I'm awfully glad you arranged this weather. I will admit that I got in Friday night and Saturday's was not my favorite weather, but aside from that it has been beautiful and as someone said when I said I was going to Maine, I explained that I hoped to get in and out during the gorgeous time of the year and before the snow gets feet deep. I hope that we'll have it finished and the State Legislature meets in just the right timeframe to enable me to do that.

Today's session is frankly one of the more difficult ones to give, in trying to give some information about automation. When asked to give an entire class, it's not too difficult. When asked to speak for an hour, it's very easy to cut things down because you really don't discuss anything. It's just a lot of terms dropped in hope that people will become familiar with the terms. To do an all day session and try to cover as many items as we have on our agenda is difficult, but we'll do our best.

One of the things that I tell a lot of audiences when I'm working in either this kind of setting or when I'm doing training, is that we have an assumption that we're supposed to remember everything that's said. I don't like to speaking to audiences like that because what happens is when I lose you, and I probably will, you glaze over and never come back, because you've lost your goal of 100% understanding and comprehension, so you give up. If what you're trying to do instead is to pick up the main points, to gain some familiarity with terms, so that next time when you hear some of these terms mentioned, you'll be that much closer to familiarity and indeed, if what you're trying to do is to learn about 25% of what I'm giving, we'll all be a lot better off. That way, when I lose you and you glaze over, you will come back, because it's all right. But please remember that. The other thing that is important to remember is that I speak at least two jargons. I'm a really poor linguist, but I do speak jargon. I speak not only Library, but also Data Processing. Sometimes I forget that I'm using a word that may be unfamiliar to the audience to which I'm speaking. When I do that, start waving your hands in the air and I will try to correct it immediately. I always remember the story a library school instructor told me back many years ago, which was a story of a library M.L.S. student who at the end of an entire year's work said, "You know, I've been looking through the students and I can't find that Elsie (LC) that everybody's been talking about." If that happens, I'd really like to correct it early on. It makes a lot of difference.

I have done a lot of work for very large automation projects, some of the largest in the country, but I also recognize those same technologies are very useful in smaller libraries, in one of two ways; either to be used individually by that library or to be used cooperatively. Whether it's part of a national network or consortium of some type such as OCLC or RLIN or to be used by a consortium such as the one that's been developed in Central

Western Massachusetts where they, in essence, have taken two-thirds of the state and have worked on a similar type of automated system. One of the things that has happened in the automation field in the last several years is this movement toward cooperation. I had read about Maine cooperation and it wasn't until I started to see some really concrete numbers and talk to people yesterday that I was ecstatic to find out that it already is a reality. It's going to make anything else that happens a lot easier. We don't have the inherent problem that begins with the competition that sometimes occurs in other states. I mentioned yesterday to the Automation Committee that one time I was giving a speech and I innocently started talking about school - public library interaction using automation and what I didn't realize is that I had walked into a hornet's nest in which the school librarians and the public librarians didn't speak to each other. And the fact that they had similar clients who moved from one library to the other, was in view of the librarians a very unfortunate situation and that if they could have done anything about it, they certainly would have. My suggestion that they might want to move just one step further towards cooperation was met with less than enthusiasm.

Back in May, I wrote an article for Library Journal that was written in response to a letter I received from a woman in a very small, southeastern academic library who had been reading the articles I had written in the previous year in Library Journal which were primarily the basis of a tutorial in the automation process. She said, "That's all very fine and good, but I don't think that we're ever going to be able to afford that and I don't quite know what to do because I 'fear that I'm slipping through the cracks of progress'." I think we have a lot of people who feel that way today. I think that what's amazing to me is that five years ago, or certainly ten years ago, when a number of us were actually working in library automation, the concept of automation in libraries was something that was relegated to specialists and was something that was certainly not mainstream librarianship. The library automation discussion group, which was an ad hoc group that met at ALA to exchange information about current activities, was a group that met in a small room and it had about 25 to 50 attendees all of whom knew each other and who communicated with each other between ALA's by just picking up the telephone. The ALA session was more just an exchange of exactly what the progress had been on this project or that project. By 1980 and certainly by 1981 in San Francisco, the group had grown to a group well over 300 people and it had become absolutely unmanageable. The concept of a bunch of us sitting around exchanging experiences was no longer possible, and even, frankly, the 25 to 50 of the mid-1970's was a far cry from the early 1970's when a dinner was held at the Southeast-Southwest Library Conference in New Orleans. This was a dinner at one of New Orleans famous restaurants and there was a large group sitting around the table. A colleague who had been sort of dragged along looked around the table and said, "You know, I think everyone I've ever heard of working in library automation is sitting at this table tonight" and indeed that was true. This was a table

of no more than twelve or thirteen.

Today, we have more than that sitting in this room. We have more than would have attended an early automation discussion group. About five years ago, I started getting asked to speak to groups of children's librarians. We went from this being a highly specialized library activity, certainly not something that anybody except for a few specialists had known about, to something that was getting to pervade the library field and people were beginning to feel that they had been left behind. They weren't just five years behind, they were decades behind and that it all happened in just a few years.

One of the real serious questions is how did that happen? Before I start - this is where people start to take notes. Now, let me warn you about taking notes. You don't need to take notes unless you have a strong compulsion to do so because we are transcribing this entire speech and it will be part of the final report coming back to the state of Maine so that if you would like to just listen, that is absolutely permissible and you'll have your notes at the end too. The other thing that I want to tell you is despite the fact that we have an overhead projector sitting here, we did test it out earlier and discovered that because of the way this room is set up, with very close distance between the overhead and the screen, we would either have to issue binoculars to the last fifteen rows, or I would get the same sort of criticism Don Wismer gave to some of the speakers at the Integrated Systems Conference in Atlanta last week which was that he couldn't understand how some of these people who do a lot of public speaking could have prepared such crude slides and I don't want to get in the middle of that one. So I am not going to use most of my overheads. I have a few that we may try and if you start to laugh we'll just turn off the overhead projector. I have a large stack of them with me but we will not be using them. So it is one of your few chances. You don't have to take notes, you don't have to view the slides and try to memorize them. Relax and learn.

I also recognize that this group has a wide variety of experiences with automation, which also makes it difficult to speak. There will be times when some of you are going to be bored stiff. You may leave if you wish. What I'm trying to do is to strike a balance and I hope that for everyone there will be places where they may feel that this is either not appropriate to their library or over their head and there will be other times when they feel that we hit just exactly the issues they need to know. We'll have some other times when you already know the issue. Remember that there are a lot of different people in here from many, many different backgrounds and that's what we're really trying to do. It is going to be sort of general, but we'll try our best. We will try for some questions. I hope to have some time for questions before lunch, but because what I'm going to say all sort of flows into each other, I may wait until later for questions, simply because the answers may be given later on. We'll see.

Well, where did library automation start in the first place? It started back in the 60's like so much other automation began except that it did start later than the first automation which did start in the 40's and 50's. By the late 50's we did have some very significant projects going on in general automation. However, most of those projects that were going on in general automation in the late 50's and very early 60's had very strong economic ties to working on them. At that time, I was working with IBM and we were working on controlling oil refineries, paper mills, lots of different projects which had very close ties to financial rewards, very easy to measure. It was also the time when we couldn't get a computer that was powerful enough, that was big enough. In those early days, IBM used to say that the question was always, "Who was going to buy the third new computer that came out, because the first two always went to the Livermore Labs and to Los Alamos." They would buy anything as long as it was bigger and faster than what we had had before. The computers I worked on in those days took a room about half the size of this room for the Central Processing Unit. We had another room about the same size for the peripheral units, the card readers, the tape readers, the paper tape readers and we had a third room which held special air conditioning and electrical requirements for that computer. As you're well aware from all the stories you've read, the microcomputer that you can buy down at your local computer store today is more powerful than those computers and it's something you see kids lugging to school. Montgomery County Schools in Maryland have 6,000 Apple IIe's and they're one county school district. You've all heard the stories about what would have happened to automobiles if they had had the same work applied to them, the same results as the computer, how much cheaper they would have gotten, how much further they would have gone on a gallon of gasoline. What everyone neglects to mention is that they would be too small to fit into.

In the early 60's, as some of these computers began to appear in academic institutions and that was primarily where they began to appear, in academic institutions, we started the operation of the automation of libraries' internal functions. By internal functions I'm talking about such things as cataloging, acquisitions, circulation. Things that were done that really didn't affect the public, the patron, very much, that really were more things that we did internally in our own operations. These operations were very expensive. They were using expensive computers and they were having to be programmed individually, programming being the creation of a software, those things which make the computer run. You put software on hardware. The early systems also suffered from the fact that they were very much tied to the storage devices of their time which were punch cards and magnetic tape. And we had a lot of systems which were developed for one institution which were based on the 80 column card, which meant that no matter what the title of the material really was, what the author really was, even if it was one of those horrible government committees, you still were limited in the number of characters you could use. In many cases, what we tried to do was to fit all

of the information about one piece of material into 80 columns, 80 characters of information. That works just fine for some titles, but not too well for others. A title named "Kim" fits real nicely within 20 characters, but an awful lot of others don't. The other problem we had is that the library field, like most others, and indeed most others are still this way, had no standards, so we could transfer neither the programming nor the information we were working with. So, as I say, most of the work was also being done in academic institutions and it was being done because we had a lot of people who were beginning to take the very first computer science classes. The first computer science graduates, people who actually majored in a field called Computer Science, didn't come out until 1963-64, in that era, and they were very much tied to electrical engineering, that's where they got a lot of their students, and they needed places to practice. So, they went over to the computer center and a lot of graduate theses were done that worked on library applications. Meanwhile, in the public sector, public libraries, etc., the library was about the same status that unfortunately is in many locations today, which is about 285th on the priority list. As recently as five years ago, I had a head of a public town data processing department explain to me that he would be very happy to put the libraries on my system, except we had to realize that he would stop the system every Friday afternoon in order to run the payroll. Well, that was very nice, but I wasn't sure what we were going to do about the patrons during those hours.

Well, during the 1970's we began to explode in the area of library automation and part of this had to do with the development of the MARC standard. You usually see it in four capital letters, MARC, it stands for Machine-Readable Cataloging. Its more formal term is the MARC II Standard Communications Formula. Contrary to what you really believe, it does not refer in any way, shape, or form to the intellectual content of the record. It merely describes the form in which the record is transmitted from one electronic device to another. It means that we develop conventions. It means that whenever we describe a title, we always call it a 245 and subfield A is the main title and subfield B is the subtitle and subfield C is the author statement and it is always thus whether the record was created by the Library of Congress, Harvard University, or a small public library in Iowa. It has to do with the way the record looks. Computers, being very formal, dumb machines, have to be told exactly what things look like and that's what MARC enabled us to do. It is interesting in talking to people in other fields, including computer designers, when you talk about having a library standard. First of all, they're amazed that we have a standard and secondly, they're absolutely bewildered that we ever got everybody to agree to that standard, but we did. In that respect libraries are well ahead of many other industries in data processing. There is another kind of use of MARC and these two terms are tossed around fairly much with abandon. We have the communications format which refers to the format which the record is put onto a piece of magnetic tape or other electronic device. But the Library of Congress also catalogs materials and they

catalog materials that conform to the MARC II Standard Communications Format and when those records come out we call them LCMARC and LCMARC refers not only to the format, but also to the content. That's just to make things a little more complicated. It is directly the result of the development of the MARC II standard that led to the creation of bibliographic utilities. We would not have OCLC today if we had not created the whole bibliographic standard and now we not only have OCLC, but in this country we have basically four utilities, OCLC, RLIN, WLN, the Washington Library Network, which primarily works in the Pacific Northwest, and UTLAS which comes out of the University of Toronto Library Automation System and are now beginning to really penetrate the United States market, especially since they've set up an office in White Plains.

What else happened in the 70's that led us into automation age with libraries? Well, we had a lot of centralization in Data Processing, where incidentally we're seeing a decentralization today. Centralization of data processing allowed us to be able to afford some of the bigger systems. Also, disk storage began to be much cheaper. Many of you may be familiar with the floppy disk you see in a microcomputer. It is about, well, there isn't a standard. It ranges from 3 1/4" in diameter to 8" in diameter. It is called "floppy" because that's exactly what it does. If you should ever take it out of its paper jacket, and don't ever do that if you intend to use it again, and hold it in the breeze, it will bounce up and down. It is not a rigid platter. But before that, we developed for the first time, actually in the early 60's that idea, disk storage that came on things that looked like great big long-playing records. We stacked them up, one on top of each other, and we stored data on magnetic mediums that were put on top of these platters. This medium was a brown, gooey looking substance. It was actually hard but it looked like sort of like a brown rubber. They didn't look like phonograph records with the familiar black plastic, but they did look like that otherwise. They were read by a series of arms that were much like those of a phonograph that moved in and out on top of each other, reading the information.

Over the years, we have been able to pack more and more information into a smaller and smaller space and we have been able to manufacture these disks at lower cost. When you realize that we have moved from an 80 column card to a standard MARC record which now averages 750 characters and that if you wish to put this record into an automated, integrated system today and you wish to be able to use this for, for instance, an online catalog with key word access, (we'll get into those terms later), you need to count on approximately 3,200 characters of storage for each title that you own. We're not talking anything about how many copies, this is just per title. We've gone from the 80 column card to 3,200 characters. That's very necessary for libraries. We couldn't do it until storage had gotten cheaper.

The other thing that this type of storage allows us to do is that we now can have non-sequential storage. If you put something on,

for instance, a long piece of magnetic tape, which is like the tape you get in a cassette, you have to keep searching through the tape to find the information you want. You need random access, which the disk allows us to do.

The other thing that happened in the mid-70's that we give much too little credit for in the library field, is the growth of the for-profit sector. There is unfortunately a feeling from many librarians that somehow, people doing things for profit are out to get the library. I think that partially goes back to the fact that in most cases, our services are given to our patrons for free and we, most of us coming out of the academic tradition that we do, with our history and English majors, etc., are not familiar with the method of cost accounting and figuring out how much things truly cost. But the vendors are actually what got us into the library automation market, because for the first time with the standards developed, they were able to create a product that could be moved from one library to another, unlike the ones in the 60's, which were written just for one university, that could be customized by filling in the blanks so that the program would be written to allow a standard due date, and you decided whether that was one week, two weeks, a semester, a year, whatever you wanted and you filled in the blank. Not every time when the program was run, but once, when you set it all up. Without the vendors enabling us to save costs on programming, we would not be where we are today. In the 80's we went back to decentralization. We saw the two extremes grow. The growth of micros and the growth of the very large system. The very large systems grew to become much more cost effective as far as what it costs each library to participate. Now, the unfortunate corollary that goes with that, is that as we put together large consortia, we're usually dealing with larger geographic areas and the cost of linking the pieces of that system, the nodes together, usually involve telecommunications. Telecommunications can mean anything from your standard four wire telephone to microwave direct satellite broadcasts, almost anything. Unfortunately, as you're very well aware, those costs have begun to skyrocket and worse, they've not only begun to skyrocket, but they've become extremely uncertain and probably will remain unstable in all aspects, not just what's coming out of the old Bell operating companies, for the next three or four years. Storage costs have come down. Programming costs have gone up. As the cost of the hardware has gone down, the percentage of the price that goes into the software, the programming, has gone up and increasingly, we're asking for much more in the way of sophistication than we ever expected before. Right now, in the average system, this is not library wide, but industry wide, the cost of the hardware is about 20% of the total purchase price of a system that a company might install.

We're going to see more and more standards. We're working right now on a standard for holding statements. We're working on a marvelous standard for transmitting acquisitions and order information back and forth. We're going to see more and more pre-packaged programs, things that you pick up and put together. In

yesterday's meeting, one of the things that was mentioned was the use of microcomputers and although I'll discuss that in much greater length later, one of the things that I think will help libraries move into the use of microcomputers, is the growth in the number of pre-packaged programs that can be used by libraries. In essence, off the shelf software.

The new word in library automation is "integrated" which presupposes one solution. That's not true. In the first place, we have no truly integrated systems, but everyone wants one, everybody thinks they should have one. Everybody thinks their neighbor already does have one. Its basic function is that it works off one database and it usually works with circulation modules, acquisition modules, public access catalogs. It is however, possible, and if any of you read an article I had in a recent Library Journal which I think might have been June, but to be quite honest, I write them several months before they're published and I can't remember which issue it was in, about the number of functions that people are actually asking for today. Word processing, electronic mail, information utilities. "Information utilities" is a term that is used for the reference databases, such as BRS and DIALOG and Medline, which also developed during the 70's. They want Teletext, which is the ability to put information on the screen of your patron's home television set. Everything is moving, as I said, very rapidly. Things are changing and there is this horrible feeling that "I can't ever keep up." There is a corollary that goes with that that makes it even worse. I was called in by a comparatively small library to do one day's consulting on some of the options that they faced. And at the end of the day they looked at me and said, "You know we were really hoping that by the time you left today, you would give us the name of a company that we could call and give them our check and put the system in. What we discovered is that I guess we'll have to work after all." Because there is no longer just one solution to any of the problems. The options are exploding as far as what you might be able to do.

The MARC record, and we'll get into this more when we talk about retrospective conversion, has the ability of allowing someone to create it once, and if we're really lucky it's the Library of Congress, and we can use it over and over and over again without all the costs of keying in all those 750 characters of information or worse, the intellectual cost, the cost of the intellectual work of trying to figure out how to catalog the book. That does, however, lead to the fact that as we work with automated cataloging, we keep doing this search for the perfect record. There are some interesting fallacies in all of this because the search for the perfect record is based on what librarians think the perfect record is and we're discovering more and more that that is not what the public thinks is the perfect record. I don't care if you're an academic library which is spending many hours creating a full record which if you're still using cards, goes on three or four cards, or if you're a very small library which basically creates an author, title, call number card, there is still the problem that we are just now truly beginning to find

out what patrons are looking for in a catalog.

In the early 1980's, the Council on Library Resources, sponsored a very expensive, very extensive study of online catalog use. Neal Kaske was at OCLC at the time and was the project leader for the OCLC part of the research. He made a very good point at the time. He said, "When we began this project, we knew nothing and we were ignorant. Now that we've worked on this a while, we know about 5% of what we need to know and now we're dangerous." Because that is exactly what is happening. We're finding that people don't search catalogs the way we thought they did. They aren't looking for information the way we've assumed they have. So the perfect record is indeed something that we have set up in working for what librarians want and we're really still not sure what it is that the patron really wants. I think one of the most heartrending and also so true examples of some of the problems is that we in working with automatic online catalogs, some of the systems that have been developed have what are called transaction logs. They are able to keep a record, not tied to an individual, but just the terminal of exactly what happened on the terminal. What the patron asked and what the response was and those transactional logs are giving us a lot of extraordinarily valuable information as to how people search. The most pathetic case that I've seen comes from Syracuse University where a student was looking for material on leprosy and after trying eighty different ways of getting at leprosy he gave up and never did get a citation. If, on the other hand, he had spelled leprosy right the first time, he probably would have gotten many citations. What are we going to do about that? Well, we're a little uncertain. There are some systems that are used in other data processing called Soundex which gives people the ability, the computer basically starts substituting phrases, word sounds for other word sounds and other spellings. There is an existing online catalog today which does marvelous things with taking out the vowels and squashing the consonants together and matching that against every other word in the system. It works fine except for words that have a lot of vowels and not very many consonants. Soundex is often used in computer systems that have millions of names in them and it works very, very well except that it doesn't work on Hispanic names which is all right if you're doing driver's licenses in the state of Maine, but it doesn't work too well if you're doing driver's licenses in the state of California where one out of every seven school children speaks Spanish at home.

The first function that was automated to a great extent was circulation and libraries have run into a great deal of difficulty in situations where they're going to be forced to hire systems analysts who may be paid more than the library director. We went from one vendor, CL Systems which ran on a minicomputer. Now a couple of years ago, I could stand up here and give you some very nice, clean-cut definitions of what was a main-frame computer, what was a mini, and what was a micro. You can't do that any more. The lines between them have blurred so heavily that it is simply impossible. I heard a definition recently that said a

micro computer can be picked up by one person, a mini computer can be picked up by four and you need a crane to lift a main-frame. Maybe that's the best definition we've got today. The definitions on how many terminals you can attach, how fast they go, what kind of storage capacity they have, blur so heavily that we now end up with super minis, super micros and its very difficult to tell, but we did start out with one vendor who ran systems on one mini computer. Today we have many vendors, probably close to twenty who run systems on everything from single micro computers to multiterminal microcomputer systems to small minicomputers, well, super micros to small minicomputers, to large minicomputers that are linked together, to main-frames.

Basically, a turnkey system in circulation, works by working with three major files. A title file, a copy file which in the automation field is called an "item field," and a patron file. Each of those files must be put into the computer in a way that the computer can read and we'll talk about what we call retrospective conversion in a little while. Retrospective conversion are two words that strike terror in hearts of most librarians that are contemplating automation and well it should. But the computer can't work with anything we hand write. The computer needs to work from something that is in electronic, machine-readable form. In essence, in a circulation system, you put together these three files and you separate them. That's what a circulation really is. It is taking a copy and attaching it to a patron while the patron has it. And when the book is brought back, the link between those two files is broken. One of the nice things about automated systems, for those who are concerned about privacy, is that that link is broken for all time, as long as the book does not have a fine due on it. Once the fine is paid, the link is broken.

What's interesting about working with some patrons, is they're very upset by that. They have used the information that's sitting on the book card inside the book now not only to tell whether they've read the book before, but if Maude liked it, I would like it too. So, they're actually looking to see who's read the book before they have. It flies in our feelings on confidentiality, but it's interesting in working with some libraries how strongly the patrons feel about that. And indeed, in one case, the library had to launch an active campaign explaining privacy to deal with some of the questions of people who kept saying, "But I want to know what my neighbors have read, so I know whether I want to read it or not."

Circulation does many, many things. It doesn't just circulate books. It does check books out and it checks books in. It also places holds on books and detects when the book comes in whether or not somebody else wants the book. It also sends out overdue notices. It sends out notices which we normally call bills which basically say, "You ignored the overdue notice. We presume you've lost the book. Send us money." It sends out fine notices, notices that books are being held for patrons. It also can keep track of delinquent patrons. "Delinquent patrons" is a

term we tend to use in library automation. I think it's something that needs some discussion in the library field. There are a great number of librarians that somehow feel that putting any kind of prohibition on people borrowing books is somehow wrong. What we've discovered is that, particularly with an automated system, we can drop both the overdue rate and the loss rate dramatically and my feeling on the whole subject is that I can see no reason to allow those 2% of the patrons who tend to abuse our privileges, the right to take out more books, thus depriving the 98% of our patrons who basically abide by the rules. I'm not worried about the person who has a book a couple of days overdue or whatever. I'm talking about the person who walks out of the library and does not return the book. Or the person who keeps it two months overdue without ever bothering to renew it. Most automated systems will allow you to renew a book almost indefinitely as long as nobody else is waiting for the book, if your policies so provide.

The other thing that the circulation system has done over the past is that it provides us with a de facto staff catalog. It is not an online public access catalog because we don't have the help messages, the assistance that allows someone to walk up to the terminal and immediately use it as they would have used a card catalog, but for staff which use a terminal every day, it becomes an excellent source of information. Because you see, one of the questions that I always find interesting, librarians went to library school, they learned about reference interviews. And that is that the question the patron asks is not always the information the patron wants. So patron calls up and says, "Do you have this book?" And we go to the card catalog and say, "Yes." That was not really the question the patron asked. The patron was not simply curious as to whether we owned the book or not. In almost every case, what the patron really wanted to know was, "Do you have this book and can I get it?" And by going to the card catalog and telling him, "Yes indeed, we have the book," you haven't answered the question at all. One of the reasons that we haven't answered the question leads back to the fact that in many cases we don't have the vaguest idea where our books are. Of all the assets held by the municipalities across the country, the asset that is least controlled is library books. In many cases, when the auditors find out the procedures we use for keeping track of our books, I've had one auditor tell me that when he found out, he decided that he could blow the whistle and cause a huge investigation so he looked around and discovered that every other library in the country was doing about the same thing, so he just put it under the rug and pretended he'd never found it.

In some systems, particularly photocharge systems, when a patron says, "The book is not on the shelf, where is it?" the staff member gives a response that goes something like, "Well, it must be checked out. Fill out a reserve card. When the book comes in, you'll get it." If the librarian was honest, when the patron said, "The book isn't on the shelf, where is it?" the only proper response is, "I haven't the vaguest idea. Beats me."

We have a lot of problems with building on order information. We tend to keep lots of little files all over the library of different types of information. In a small library, that's o.k., because the same person who orders the book, is the one who's dealing with the patron. As the library gets larger, this is not always possible, and you need to have lots of different lists around and you have different procedures so that if a person wants to reserve a book which is not yet in, you use a whole different procedure than for someone who wants to reserve a book which is part of your cataloged collection. The problem as we got into bigger and bigger systems has to do with the subject indexes. And the indexes are very much like the indexes in the backs of books. They simply guide you to information. What we basically do -- Let's do a real simple one, let's discuss a patron. We have a file of patron names and we have a file of patron numbers. Those numbers are issued sequentially, but they probably aren't on your disk storage sequentially. They may be close to sequentially, but not exactly. And your names, of course, although they can be alphabetized and have to be alphabetized inside the computer if you're going to find them, can not, certainly we don't accept those patrons in alphabetical order. "Today we're taking applications if your name begins with A." So they're on the disk in random order. We now need to create an index inside the computer that will lead us to the right place for the patron's record and to bring the record back into the computer to be used from the storage medium. The problem is that an index in a computer basically cannot have more than about 100 terms in it for efficiency's sake. And you certainly don't want me to explain this one. But, what it does mean is that if you have more than 100 patrons you need a second index which tells you which of the first two indexes the name is on. And if you have more than 1,000, etc., you get more and more layers of indexes which take more and more storage space and which have a potential of slowing your system down. As the systems get larger, we have some tremendous problems with what we call response time. Response time is the time between the moment that you hit a key on a computer, something such as an Enter key or a Return key, whatever it happens to be on your computer, and the time it takes the computer to respond back to you. As long as that number is somewhere under about 2 seconds, you don't notice. You think it's instantaneous. If you're doing circulation control, and are using a wand, a light pen wand that reads labels, similar to those you see on grocery products, you probably won't notice the change in response time until it gets over about six seconds. If response time gets any longer than that, the staff begins to talk about how I went out for coffee between activities, even if the response time is ten to fifteen seconds. It's very interesting what happens to your concept of time when you're using automation. You expect it to be very, very rapid.

As long as your system is operating at a certain level, your response time will stay within the acceptable limits. The problem is when your system gets overloaded or what's specified

as being too small, it would be very nice if it just slipped from 2 seconds to three seconds. We could probably live with that. Unfortunately what happens is that we have exponential changes. The changes move along at a fairly even level and then suddenly go from 2 to 3 seconds up to 20. There doesn't seem to be any nice, happy medium. We have to know how much we're putting on the system and the system has to be designed to handle that. It is not merely a question of how much you put on files. It also has to do with the activity level that you're using. Now one of the problems that we have right now is that, and I will discuss this a little more in depth too, is we have no real communication between different systems developed by different vendors. It is very difficult for you to have a system at one location that can be searched by terminal from another, what we call "foreign", system. At the moment, there are some systems doing this, but it's very crude and it's being done by the persistence of the librarians.

After circulation systems, probably the next thing that happened was new forms of catalogs and all of them were dependent on these machine-readable files that I keep threatening we're going to talk about later. Back in 1974 saw the first development of a Computer Output Microform catalog called COM and basically what that means is that the computer produces a tape which is put through a special machine which turns what is contained on the tape into microfilm or microfiche. The process is identical until it actually gets down to producing the medium on which it's stored. We also were able to move from that to online catalogs. Basically we have two types of online catalogs. One is what we call menu-driven. Menu-driven says the patron, the user, gets a continual choice of what they want to look at. Usually this does not require any typing or the only typing that is required is the entering of the number 1, 2, 3. It will come up as phrases on the screen and will say, "Do you want to search for 1) author, 2) title, 3) subject?" Down at the bottom is a little instruction place that will say, "Push the number that corresponds to the type of search you want." And you push it (1) and now you're ready to search on author. In some cases, it may actually come back with a list of ten index points to authors and you choose which area you wish to search. You continue to do this until you get down to the exact author, to the exact title you're looking for. This is a very simple system to use for novices. It requires much less training in the beginning than does any other type of online catalog. Unfortunately, because of the number of steps that you have to go through, it is infuriating to staff members and experienced catalog users. If you already know that you're looking for something by Kipling, to have to go through 8 or 10 screens to find it is very infuriating. On the other hand, you see, the menu system is extremely good for that person who couldn't spell leprosy, although, there are cases where people have pasted on the top of their terminals for online catalogs, a copy of the alphabet. You may laugh. I used to think that this was ludicrous until I found that one of my very own pages had the alphabet taped to the cart which he used to shelve.

The second type is the keyboard type which does require some typing. It allows you direct access into the catalog. It allows you to say "find author, Kipling" and you immediately will go to all Kiplings. Now if you haven't been too specific, you may indeed get all Kiplings. The advantage of this, of course, is that you now have one place to search, you have the ability to put the databases from several libraries together and get a union catalog which can easily be maintained. It is possible to create what we call authority control. Authority control is that which takes care of the fact that what used to be called flying machines was then called aeroplanes and is now called airplanes. You may indeed have catalog cards in your catalog which have all three headings on top of them and which you need to pull into some form so that the patron will be led to all of the materials, the co-locating feature of catalogs. Interestingly enough, I don't use the aeroplanes/airplanes example lightly; I once talked to somebody who ran a library which dealt with the history of the airplane and they kept all of the catalog cards, including such ones as the ones on flying machines, for this is what gives them a dated search. You know that any book on flying machines refers to those printed between certain years and certain years and those on aeroplanes shows those printed between other years. So it shows that there's still a need for some individuality. However, for most of us, flying machines is not something that most of our patrons come in looking for. We need a way to begin to pull those together. We need a way to automatically change every occurrence of the word "aeroplane" to "airplane" when the change is made by the Library of Congress. Not record by record, key stroke by key stroke with the eraser going full speed, but to do it automatically. And even better, if we can get it done where we don't even know what the changes were necessarily. We mount a computer tape onto our computer that comes from the Library of Congress that is approximating the Library of Congress Cataloging Bulletin, and all of the changes just sort of magically occur except for those that require intellectual decision, such as the Library of Congress taking the subject heading "Nurses and Nursing" and splitting it into two separate headings, one "Nurses" and the other one "Nursing." That requires an intellectual effort, but the computer can still help you out by pulling up every record that has that information.

With a keyboard type of online catalog, we do have some real problems. One is the weaknesses of the indexes, the kinds of things I was just talking about. What happens when a person, this is my absolute all-time favorite subject heading, perhaps because I've done a lot of library work in California, when you put in the term "ghost towns," you will not get any hits if you're doing a subject search in a well-maintained catalog. Now, what is it we really do with this? Should we immediately tell the patron what the real heading is, which happens to be "Cities and towns - Ruined, extinct, etc." or should we automatically switch them to that term, because unfortunately, as you might have guessed, "Cities and towns - Ruined, extinct, etc.," not only gives you information about ghost towns, but you're suddenly sitting there flipping through a list of books that tells you all

about Calico, CA and various gold rush towns and also about the fall of ancient Rome. If the person has been looking for ghost towns, and you automatically switch without telling them what you are doing, what is the reaction of the patron. Those of us who have used RLIN in the past are continually being amazed because of the way they search. If you search on an author name, you will not only get the main entry, the person whom the patron would call the author, but you will get a search on everyone who was an added author, if the book was based on a lecture given by a third person. It will search any name that is in there. When you get the display back, of course, it's a very short one and you can ask for the full record later. And you're always amazed because in amongst the records that you know exactly why you got, there's always one or two that you can't imagine how you got this record based on the search you did. So people are always pulling up full records which they know are not the ones they're interested in just to find out how on earth we got this record. Well, that's fine when you've got technical services and reference staff that are trained in the use of RLIN and understand why that happens and now what they are doing is satisfying their curiosity. What happens to the patron who suddenly gets that information?

We have another severe problem with public access catalogs which are really today's buzz-words. We feel that anyone who doesn't have a public access catalog is really at least twenty years behind. They cost an awful lot of money. And the other one that is leading us to some problems is that we don't know how many terminals we need. Not at all facetiously, I really only have two good formulas for how many terminals to buy. There are some terminal formulas that are based on circulation. There are some terminal formulas based on how many people walk into your library every day. There are some formulas based on your student population. There are some formulas based on a ratio of circulation terminals to public access terminals. There is one formula which takes 100 pages in a book, but I have a sneaking suspicion really only applies to Ohio State, but the formula is so complex that no one else has ever used it. But there are only two rules of thumb that I have. The first one is: as many as you can afford. And the second one is: whatever you've bought, you need more. And that's exactly what's happening. We have such situations happening. I think one of the more dramatic ones is what happened at California State University at Chico, where they put in a very early prototype catalog three years ago with limited terminals which they knew were limited. Their card catalog is being maintained. Actually it is as close to a mirror image in content to the online catalog as possible, and they are continually getting complaints that they don't have enough terminals. The ironic thing is that as people wait in line to use the terminal, they are usually leaning up against the card catalogs. The other thing that I think is most interesting about public access catalogs, ties together with the fact that we don't really know how people search. So we try to provide as many help messages as possible in our systems, but we don't really know what people need yet, so we're doing a lot of guessing. You've probably

heard the term "user friendly." Much overused library term. As a matter of fact, another consultant and I on various airplane rides when we've happened to have found each other, have developed a glossary that runs from "user intimate" through "user friendly" down to "user vicious." And I indeed have used some which I believe at least are "user hostile," if not "vicious."

One of the advantages that the keyboard type of terminal gives us, and indeed the whole public access catalog gives us, is the ability we have never had with cards or indeed microform catalogs, the ability to do both Boolean and keyword searches. Don't worry about Boolean, I'll explain it in a minute.

Keyword searching enables us to search actual words in the title, or actual words in the Notes, or actually words in the subject heading. How many times have you been given a citation by a patron that they swear is the title of a book and it isn't? What it really is is the second half of the subtitle and they, of course, have no idea who the author is or the author is somebody marvelous like Anderson. And you can't find the book. Being able to do keyword searching would enable the patron to find the book himself. Unfortunately, keyword searching is very expensive in computer resources. There is also another problem which has to do with sort of turning the patron loose into a catalog with no controls about how long a search goes on and having them search on the word "united." When your whole system has ground to a halt waiting for this search to finish, you'll probably figure out that you need some other control over what patrons are doing on the catalog. Marvelous idea, but there are some real concerns.

Now, my one try at a slide, if you can't see it just pretend it's not even there. This is Boolean searching. Boolean searching is basically the combination of terms and it is something that those of you who have children in grade school have probably seen over and over again. I think that every elementary school mathematics textbook spends the first two chapters talking about Venn diagrams and Boolean searching and never discusses it again, but they start it again the next year. Now, we talk about associative and combination properties, that's what this is all about. One of my real concerns with everyone who wants to see Boolean searching in every public library catalog is the concern about whether or not the patron, in general, is ever going to be able to understand it.

What we really have up here is a diagram which shows three terms. One has to do with automobiles. One has to do with racing and the third one has to do with records, as in speed and distance, etc. The problem has to do with the use of the word "or" and the use of the word "and." If you go down to the lower left-hand corner and look at that diagram, when we talk about "auto" or "racing" or "records" you'll notice that we get everything. It means we want anything that has the term "auto" in it or has the term "record" in it or has the term "racing" in it. Well, use of the word "or" in common language does not usually mean an

inclusive term. It usually is trying to make the searching smaller, but in Boolean searching it doesn't work that way because what we're asking for is an element, a piece of information which is found in "automobiles" and in "racing" and in "records" and in the upper right-hand corner, what you find is that little white square are the only records you would find if you said "automobile and racing." Now that one is not too hard to understand. I think the problem is the "or." We also have a third term in Boolean searching which is "and/not" and here what we've asked for is "auto" and/not "racing" and/not "records" which means everything which has nothing to do with racing and has nothing to do with records and, in this case, all you get are the terms that are in the brown. This particular diagram of Boolean searching is very simple. It is also possible to begin to use parentheses and to nest terms. When you get into that almost no one can follow your logic. To make it worse, what the public doesn't know and I don't know how we'll ever teach them on a computer screen, is that we use something called "Polish notation" in working with Boolean searching. And I don't know, because Polish notation has been around a lot longer than Polish jokes, but that's what it is. Polish notation has to do with the order in which things inside parentheses are dealt with. The explanation is longer than the term itself and we aren't going to deal with Polish notation today. If anyone had even begun to understand that one, then we're well ahead.

I think, especially since I've seen a couple of you duck out for coffee, we're going to break now for coffee and then when we come back I'm going to do some talking about microcomputers.

And we will try to break as close to noon as possible.

In talking to someone during the break, I know that some of you may have to leave early and what they wanted to know is what I was going to talk about. See if I left any of the good parts to the end.

We're going to talk about microcomputers first; I don't know if I'm going to finish that before lunch or not. We're going to talk about microcomputers in public use as opposed to staff use. We're going to talk a little bit about retrospective conversion, about integrated systems, about online reference services, about networking, and one of my favorite soap box topics, which is libraries of the future. I have refused on several occasions to participate in discussions called the Future of the Library. The future of the library as opposed to the library of the future implies that there may not be one. I do have some very strong feelings about what we're going to have to do to be able to continue the library in the future, but I do believe that we do have a future. That's where I'm headed with numerous digressions along the way, which I tend to do, and there's not a whole lot I can do if you really want to hear libraries of the future next. You're not going to get it. But there will be a transcript, remember, so you don't really have to listen. You can actually sleep back there.

Back in February of 1982, which as computers go, was eons ago, Newsweek had a cover story on the microcomputer. They talked "not only about a myriad of computers, but a clutter of peripherals and an immense variety of software. Computer users talk an arcane language studded with incomprehensible jargon and learning to use the current generation of personal computers is like learning to use a musical instrument. It takes time and patience." And that certainly has been true of anyone until now who has used the microcomputers in libraries. Most of the operations that occur on microcomputers in libraries today have been the result of a dedicated computer hobbyist who has wanted to learn how to use the computer or has had one at home and wanted to transfer it to the library. The amount of time that has gone in in most libraries for development of specialized library microcomputer programs is immense. It is absolutely incalculable because most of it has been done on the side. But let me talk about the ideal way that you would go about procuring microcomputers and using them in your library. A typical thing that happens, and indeed I've already received information in at least two or three instances that are happening in Maine, of cases where someone already has a particular brand of microcomputer. Either it was given to the library, it belongs to a board member, it belongs to a library staff member. What you do in essence in that case, is you work backwards. You work from the hardware back to what am I going to do with this thing. Let's talk about the ideal way and then you can work the realities in a little differently.

The first thing that you must do is to define the problem. Sounds a little elementary, but it is something that is often skipped, particularly in today's world with microcomputers. You don't find people doing that when they're talking about much larger computers, but the glamour and the excitement of working with a microcomputer has so taken the world by storm that they forget that the first question to ask is "What do you want it to accomplish and why?" Not how, but what and why. We tend to have a vagueness of vision in libraries that the computer is going to do all these things, but we're not exactly sure how. Are you going to use it for public use, for staff use or for both? On the same terminal or multiple terminals? Connected to one individual database or one central database? Automation should be the occasion for dreaming. What would you like to do, if you could? It's very important that you not try to replicate manual operations. If in your current operation, you do step A, B, and C, forget it. What you should concentrate on is what it is you are trying to accomplish in the end. If you concentrate on A then B then C, I can guarantee that you will develop a very inefficient computer system. Because the things that computer systems do best are not the very same things that humans do best. Don't expect automation to solve all your problems. If you've got personnel problems now, wait until you see the personnel problems after automation. If you have fighting between public services and technical services it will get worse when they try to compete for a scarce resource.

On the other hand, although it won't solve all your problems, it will give you something nice and inanimate to blame. It's important that when you start looking at solving problems that you use some old-fashioned systems analysis. I guess for many people, putting those terms together, old-fashioned and systems analysis is sort of bizarre, but it really is an old-fashioned look at what you're doing, what steps are you taking? Who's using the files? What are they using them for? What pieces are they using? One real trap to avoid is one that happens to systems analysts who aren't listening and don't know their clients very well. That is, that you look at the use of a particular file for task A and you decide that this particular file is not needed for task A. So you go to the person who's using it or who's maintaining it or worst - the person who decided it could be used in the first place and developed it for 25 years. And they're a little suspicious of you. They're not going to volunteer anything. If you don't ask the right questions, you're not going to get any more than exactly the question you asked. They're not going to lie to you, but you're not going to get the complete answer and you blithely go up to this person who has a strong vested interest in this manual file and say "Do you use this file to do job A?" And they quite truthfully say to you, "No, I don't." You get rid of file A. Three weeks later, the job falls apart because it turns out that for task B that same file was used and now you have no substitute for task B. It's important that you do a full scale analysis of how you do things and why.

It might be worth the expense of buying a microcomputer, frankly, just to get staff to be analytical about what it is they're doing. Forget, "We've always done it this way." We've-always-done-it this-way has sometimes come up simply because, exactly, we've done it this way and no one's ever questioned it. And my favorite story, if any of you heard me speak before you've probably heard this story, but I still think it's probably the most appropriate in this case. It involves a woman who visited a friend who was about to cook a ham. As she got the ham ready to put in the pan she took a knife and she cut this much off the end of the ham, put it in the pan, put it in the oven. And the friend said, "Why did you do that?" She said, "I'm not exactly sure, I think it has something to do with flavor, but my mother did it." The friend says, "That's the strangest thing I've ever seen, I always cook the whole ham, I've never had any problems with it." So when the woman was visiting her mother she said to her, "Why do we cut the end off the ham? It's something to do with the flavor isn't it?" The mother said, "No, actually I did because my mother did it that way, but I think you're right." So the next time they were visiting the grandmother, they said, "Why do you cut the end off the ham?" and the grandmother said, "Oh, I don't do that anymore, I got a bigger pan." It is likely that you are doing things in your library that no one knows why you do. You probably don't have any documentation as to why the decision was made a certain way and you continue to do it. And part of it is the fear that if we discontinue maintaining that

file or throw away those cards or don't keep that register, that we will find out in six months, what the final function of that service was. So rather than question, it's better to keep it going. After all, it only takes about four or five hours a month so maybe we should keep it going because who knows what would happen if we don't keep it. Look at your discrete operations. What raw data do you have now? What information do you need out of the other end? Input - Output. How many ways do you use the same data? Data that is used for more than one operation is prime to be put on a computer, because then it can be manipulated several ways. Look at why you're doing what you're doing. Are you trying to save costs? Are you trying to improve service? or some combination of both? There is probably no bad reason to automate as long as you're honest at least amongst yourselves. You may not have to be quite as honest to the board, the citizens, or whatever, why you're automating. There's a classic story of a library that was very early into automation, a large academic library, that had a multitude of visitors in the late 60's that came to see their operation. Visitors from all over the world, prominent librarians. When the library director was asked how much the project cost and what his justification had been for it, he said, "Frankly, it doesn't make much difference, because one of our goals in doing all this was to increase the prestige of the library on the university campus and we have certainly done that. And that was worth the cost." As long as he acknowledges that that is why he was doing it, there is nothing wrong with that as a goal. If that's something he could justify within his own budget. Now, certainly he received other benefits, but that was one of his crucial goals.

What do you automate? Well, you try to automate routine, repetitive tasks. Computers are excellent at this. They are so dumb, that they don't get bored. They do the same thing over and over and over again. Now, what they don't do as well is the exception. When we build library procedures in most libraries today, we start with the exception that happens twice a year and we begin to build our procedures from that and we worry about the thing that happens fifteen times a day last. The first thing we have to do is to take care of all the exceptions. If you do that with computers, you might as well not have bought it. You might as well have written the check to the wind. You will not have made effective use of the computer. Certain exceptions will take longer with a computer than they took before and there will be some individual, who is usually poor Maude who really likes dealing with exceptions and little problems and gets them all and she will think that this computer has been a bad buy because she has all these exceptions to do. But the goal is not to make each piece of the task easier, faster, cheaper. It is to make the entire task, easier, faster, cheaper. Something that happens twice a year, you can deal with.

I had a client who kept these enormous files of every patron's application they had ever received. And I asked them why they did it. Well, because once or twice a year somebody would come in and claim that they had never taken out a card and therefore the books that were charged to their card should not be charged to them, because they had never had a card and indeed had never been in the library. At that point the library went back to the file, pulled out the patron's application for a card and said, "Aha, see, you did apply for a card." My comment to them was, obviously without any publicity, why don't you just say to the patron, "Fine, we will strike your name from the records and make sure you don't have a card again and we're terribly sorry this happened" and in essence write off the book. We couldn't do that. How could we possibly do that? That's hundreds of dollars worth of books. I said, "Yes, and then you wouldn't have to spend seven to eight thousands dollars a year filing registration cards."

It was an amazing revelation to that library that that was a possible solution. And I think, frankly, that the library profession is one which is quite prone to that because we are taught an awful lot about order. I think all of us have probably worked with someone who is happiest the day that the most books are on the shelf in just exactly the order they should be. In a way, I take great joy when I walk into a new client's library and discover that it is a library where if the circulation ever drops, they're going to have to put the books on the floor. They have a high incentive to keep the books moving as fast as they can because there's not enough shelf space for them. It means that that library is really dedicated not to preserving their resources, but to the use of those resources which is really what it's all about.

We tend to think, when we deal with automating library operations with microcomputers, of the fact that we are different, as indeed we are. But, there are a number of things we do which are very similar to things that all businesses do. Actually, part of our problem may be that a lot of libraries forget that they really are a business with budgets and making payments and providing services, because some of the most valuable things that libraries could do on microcomputers are things that are done by all businesses. Word processing programs lend themselves, quite nicely, not to the writing of routine letters, where you type it once unless you don't have any clerical help, or the clerical help you have really can't type and you want to get it as perfect as you can. But, it lends itself beautifully to repetitive drafts, grant applications, new book lists, bibliographies of one type or another, answers to commonly asked questions, some sort

of brochure you put out about your library that may have information in it that changes, ready reference information, community calendars, lots of different files that you would like to create that you don't want to have to start from scratch every time you create it. Those programs are called word processing and they usually involve the manipulation of words. They run from very simple word processing programs, there's one called Bank Street Writer, to some very complex word processing programs, for instance WordStar. How complex you need has a lot to do with the size of the document you work on. If you are writing a 200 page book and you intend to move whole chapters around, you need a very sophisticated word processing program and a very large computer. If on the other hand, what you're really going to do is write a lot of small documents, where you're going to move things not further than the next page, some of the more elementary programs will work just fine.

Another thing that can be adapted from the regular business world are things called spreadsheet programs. These, in essence, take care of anything that has to do with budgets. One of the most infuriating things with budget preparation is what happens when one element, one small number in the budget changes and everything else has to be changed. You end up having to change the subtotal for supplies, the subtotal for operating expenses and the total budget itself. These things can happen continuously as a new price increase comes through. Using pencil and paper, it's very difficult to play "what if." What happens if salaries go up or down. What happens if the average price of a book goes up or down, it never has in my life time, but what if it does. What happens if we cut our subscriptions to serials 50%. With spreadsheet programs you can do this, you can play what if and get some very good comparison numbers. Numbers, actually, which will impress you and your funding agency as to the kind of thought that you've put into what you are doing. The other thing that you may want is a database management program. That's particularly good if you're using it for ready reference or small files, community calendars and things.

Those three programs are used heavily in businesses, by home users. They can be used to do a myriad of library tasks. You can also use a microcomputer as a front end processor. What that really means is that it can be used to access other sources. It can be used to access information utilities, DIALOG, BRS, Medline and not just as a terminal to that system, but as a smart terminal. We call computer terminals dumb and smart. They all are dumb, but some are dumber than others. Some of them will store more information and make more decisions for you. When I talk about online reference services, I'll talk a little bit more about copyright rules and downloading, but it's possible to create your own search arguments and your own files of things back and forth to reference services. You can cut your search time online by using a front end processor terminal. It can also be used to access other library systems at other sites. I think

probably the most dramatic use of a microcomputer as a terminal to a library automation system is what's happening at Pike's Peak Regional Library District in Colorado Springs, Colorado. I mentioned to the Committee yesterday - some of you may already be aware of what Ken Dowlin's done out there - Colorado Springs is a community with a lot of people who are involved in high technology industry. IBM, DEC, Control Data all have plants out there. Most of them have development labs. It's one of those places where people like to live, so they've moved all these people out there. So, he's doing some things that most communities cannot. I think the secret is that in five years all of us will be wanting to do what Ken is doing, and he has 600 authorized home computer users who can dial into his online catalog and use his library catalog from their homes. That has certainly not decreased the inlibrary traffic and, indeed, one of the most fascinating things they've found is that most of their dial in traffic comes between 10 p.m. and 6 a.m., when the library is not open to people who want to know what the library has. He has 600 registered users. He has a long waiting list. He's going out for second generation system that will hold well over 1,000 authorized users and is geared up to hold eventually 10,000 authorized microcomputer users into his computer.

It is very good to use as an input device when you feed information to larger systems and there's one particular way to do retrospective conversion we'll talk about in connection to this. It's also extraordinarily good for taking small files and sorting them by different fields. It is great for creating specialized mailing lists. Putting a bunch of names in there with maybe some codes to indicate interest, and you've also got zip codes in there and other things and we can create a mailing list for anything, based on any one of those fields. When you start taking the mailing list capabilities and the word processing capabilities and putting them together, you can now create individual letters. The word processing machine at Los Angeles County Library was purchased for one goal, despite all the things that we could use it for, we were doing a lot of grant writing, we did lots of things. We had many, many things that we put on that machine, but the number one priority was the creation of individual, or at least they looked like, individual letters to state legislators. The lobbying we did was incredible, which is what happens when you're in a library that loses 60% of its budget to Proposition 13 and we needed to contact legislators regularly. With pleas, with thank yous, with information of one sort or another. We had a massive statewide campaign, almost weekly, every legislator in the state of California got a letter from us, and that was the only way we could have ever possibly done it, because they would have never responded to something we had Xeroxed.

O.K., you've already figured out now, what it is you want to do. The question is can you do it on a micro. Is that what you should do? Well, it can be used for almost everything, if the

scale is small enough. We are getting more and more hard disks, as opposed to floppy disks, attached to microcomputers. They about double the price, but they can hold up to about 20 million characters of information, which is a far cry from the very, very small capacities of the early microcomputers. And yet, there are many things that even with 20 million characters you cannot do. Remember what I said about 3,200 characters for one bibliographic record, if you want a very sophisticated public access catalog. One of my clients has installed currently, the largest operating integrated circulation system in the country. They are currently doing over eight million circulations on it and it's benchmarked to do 12 1/2 million circulations a year. It connects 25 branch libraries. When we went to the countywide Management Information Committee to get permission to do this, the whole project ground to a halt because one of the members on the committee said, this was three years ago, "I don't know why you want to spend all this money. Let's just put 25 Apples out there." It took me about a month to gather enough data to prove to him that 25 Apples weren't going to do anything and that if he'd like to give us 25 Apples, I had lots of uses for them in that library system, but certainly not to do 8 1/2 million circulations or hold information about 1 1/2 million books.

There will be a limited contiguous file size unless you use hard disks. Floppies tend to hold no more than a half a million characters apiece. You can put two of them together. These figures may be a little bit old, because I haven't sat here and recalculated them lately, and that is one way the storage capacity of microcomputers is increasing-dramatically while the cost is dropping. If we could only figure out a standard for the size of the disks, we'd all be a lot happier.

You can go from large micros into small minis, but these small computers, which are larger and faster than the old ones, are still maybe costing more money than you can afford. There's a big gap in price between the microcomputer and its peripherals which sells between five and ten thousand dollars and the next series up which is the super micro which tends to sell anywhere, including its terminals, from \$60,000 up. We don't have any real industry standards. We have two operating systems that are used, but even those among them, have some lack of compatibility. You can't be absolutely certain, when you're picking up a program that runs on one system that it will run on another. I'm not certain we need to settle down on some of these standards yet, because it is a rapidly growing field, but I also harken back to the fact that if we hadn't settled on the MARC II standard, for library automation back in 1968, we wouldn't be where we are today with library automation.

The real problem with a microcomputer is that it can only do one thing at a time, so if you plan on using it to do circulation as the books actually are checked out, it's going to be difficult to do word processing at the same time. This means that every

student who comes up with a book is going to have to interrupt what you're doing to check it out. Now, it is possible to link multiple computers together to use the same file. Of course, you can also put up two microcomputers next to each other. One doing word processing, one doing circulation, but remember when you do this, you're increasing your costs. You're now getting into a much more complicated system than perhaps you had in mind when you started.

One of the great things, talking about standards, that has developed, is a standard for communications among computers called RS232C. If your computer has that capability and you have a way to communicate outside, a communications package of some sort which usually includes a modem, which is a modulator demodulator, you can communicate with other computers. The important thing about a modem is that it translates signals that are inside the computer into a form that can be used by the telephone line and at the other end it takes the signals off the telephone line and translates them into a form that can be used by a computer, so your computers don't have to be next to each other anymore. You can use a modem or an acoustic coupler, which for the purposes of this talk, is the same thing. You need some sort of software, some sort of a program that will allow you to operate these things. That is the great gateway to the rest of the world. Without an RS232C and either a modem or an acoustic coupler and software, you are restricted to using your computer inside your building.

When you start looking at automating, it's really the same process, whether you're going to end up with a microcomputer or a mini computer or a main frame. First of all, don't chase the perfect system. It's very tempting to do this, particularly in the microcomputer business. It used to be that when I talked to computer vendors, people, about doing something, they'd talk about don't do it now, we're going to have this great product next year. Then, they started talking about in just a couple of months we'll have the new product. I think I reached the ultimate one day when I was doing some research on word processing programs and I walked into my local computer software store, not really telling them what I was doing, but pretending that I was buying a package, asking questions about the existing packages, and the first thing out of the salesman's mouth was, "Don't buy anything today, because tomorrow we are going to have this great new word processing package that will solve all your problems." If you chase the perfect product, the perfect solution, the very latest technology, you will never have anything. You can still be using quill pens, because there will always be something new. If you figure out what you want the program to do, and you make sure that whatever it is that you acquire does it, then it doesn't matter if there's a new piece of technology on the market tomorrow, your needs will still be served.

When you're working on needs, make sure you do some projections

of what you might be doing next week, not just today. Make sure you do buy things that have some industry standards, such as one of the two standard operating systems and the RS232C interconnect so that you're able to take advantage of new things that will occur. Make sure you buy a computer that has some expansion for storage so that you can take advantage of things that occur in the future. But, don't wait, chasing the perfect system. Now, if you have done an analysis of the needs and there is nothing out there that meets them, then wait. But, if you can find something that meets your needs, go for it now. You probably can save enough money to make it well worthwhile even if you have to replace the system later.

Incidentally, that's another issue: we tend to equate buying computers of any type with major capital expenses and they're somewhat akin to buying a building. You know, you buy one building in your lifetime at that library, so you should only buy one computer. Well, that's a fallacy. Computers have a life, a physical, useful life of somewhere between 5 to 7 years and it's going to have to be replaced. After about 7 years, you're going to find it difficult to get parts. You're going to find it difficult just to keep the thing operating. If any of you have ever tried to keep a vacuum tube television set going these days, you'll understand part of the problem. It costs too much to fix; the parts aren't available. Don't get too involved with the NIH syndrome which librarians do a lot of and so do other people. NIH means Not Invented Here. If we didn't devise it, we won't use it, couldn't possibly fit our very specialized needs. When I talk about turnkey systems, after ten years of having library turnkey systems do circulation, if you can't find the turnkey vendor who does 99% of the things you need your system to do, there is something drastically wrong with the way you run your library. There is nothing wrong with those turnkey systems. They give you so many options and, frankly, what I think I'd do then is call in somebody to look at my operations and decide what it is that we could jettison. Again, there are always very small exceptions, particularly in special libraries where some security needs may be involved. But, for almost everyone of you - if you can't find something off the shelf that can meet your needs, seriously consider changing what you're doing.

Watch out, on the other hand, for being a pioneer. You know the story about the pioneers, they're the ones with the arrows in their backs. Watch out for new systems. You don't have to be reading computer magazines these days to know about the bankruptcies that are occurring in the microcomputer field. Tempting as it may be to buy an off brand computer, particularly a fire sale where they're trying to get rid of them, be very careful. Remember what I said about computers, only 20% of the cost of an application is usually the hardware in the long run. Think very seriously, before you reject it, of using one of three computers or types of computers. Look at an IBM PC or a compatible and by compatible I mean strongly compatible, because

those are being used in thousands of businesses across the country. Look very seriously at Apple II products because they're being used in thousands of schools across the country. And look very seriously at the Radio Shack TRS series of computers because they are being maintained and owned by thousands of users. Now, that is not to say that the computers I have not mentioned are not any good. They are great if you happen to be someone who wants to play with a computer, who wants to learn to program, who wants to be able to create new things on it. But, if what you really want to do is to pick it up and plug it in, then look very seriously at one of those three types of computer, because the other ones will have a fewer number of users and therefore, much less special library programming developed for them. If you have some special needs, such as portability and things, you can get into some other areas. But, think of those first.

When you start talking about putting in a microcomputer, look very carefully at how much time you plan to implement your program, because the time that you allow will influence the perception of success. If you allow enough time and actually allow some slack in the middle and you come in on time, your project is a success even though you could have also estimated a time line that brought it in six months earlier, but if you missed it by two weeks, your project already would have been headed for doom, because you would have been late. Allow lots of time. If things will go wrong, they will definitely go wrong with the computer situation. And, now that we're dealing with telephone companies, it makes it even worse.

If you are working with a municipality or a university or a company that has a data processing department, do one of two things. Either enlist their help and make sure they really are helpful, or get them out of your way. That it is a tremendous problem right now with computer departments. One of the interesting things that is happening to computer departments, is that they're extremely threatened by the growth of microcomputers. They don't know how to manage it, they don't know what to do about it. In the current issue of the Harvard Business Review there is a very good article on managing the microcomputer in data processing departments. There are two pieces of information that I find absolutely fascinating, one has to do with the fact that a microcomputer can pay for itself, if it increases the productivity of an employer earning \$20,000 to \$35,000 a year by just 10%. The other thing, and all I can do is quote this one, because I haven't even begun to check out any of the numbers, relative to the cost of the average salary today, putting a microcomputer on a person's desk is no more expensive than giving them a telephone was in 1950.

If you're going to have to go for budget or gift money to get a microcomputer, be realistic. Get everything you need now. It is much easier to get more now than to go back and ask again. Going

back and asking again, unless it's a situation in which you've warned them in advance that you're going to go back, makes it look like you can't plan. If you do that your chances of getting the color monitor you need or the extra disk drive tend to drop considerably.

How do you manage automation? Well, the first thing you do is make sure you put one person in charge. Make sure that they know everything about how the current system works, the manual system you're doing. Make sure that they know that Maude keeps a blue file in the bottom desk drawer, because the tendency will be that Maude will keep the blue file going while using the microcomputer and instead of having all this extra time that you thought you were going to have, you're going to find out that Maude is keeping both systems going. All of a sudden Maude never has any time. Now, on the other hand, with microcomputers, there is a tremendous danger, much more than with minis and main frames that only one person will ever know how it operates. It becomes sort of a secret. Well, the whole movement toward microcomputers started out as something that only hobbyists, computer freaks did. It was much too complex for the rest of us to understand. Well, as long as what you're trying to do is work with the "innards" of a microcomputer, that may be true. That's why the movement is towards more standardized programs, so that everybody can know. What's going to happen if the only person on your staff who knows anything about the microcomputer works either leaves or steps in front of a truck tomorrow? You plan your project. What are you going to do, when are you going to do it. Get your staff involved. Everybody should be able to use that micro. Don't let anybody put up the barrier of being afraid of the terminal. You never know who has insights and the aptitude and the knowledge that will help you work that.

I'm going to quote some things from a brand new book that has nothing to do with microcomputers called Subject Searching in Library Catalogs and it is written by Karen Markey and it's the fourth monograph in the OCLC series. In studying online catalogs they talked about children using online catalogs, and adults, and they did some what they call focus group interviews to elicit information. Talking about PAC, Public Access Catalogs,

Children love to use it. The resistance progresses with age. Kids want to be shown, when they'll play with it. Adults want to be reassured that they won't break it. Children enjoy discovery because they are not grown ups. They see the whole thing as a grand adventure and toy. They will sit and push buttons and push buttons until they get what they want.

In a further focus group, and I think this is a marvelous contrast,

An older user at the Iowa City Public Library said,

"Kids have no concern about whether they are doing right or wrong. They just run up to the computer and keep trying and trying and trying."

At Syracuse University a faculty user said something which I think contrasts very nicely.

Older people aren't quite sure how to use the computer and your pride gets damaged when you try a new technique that you're not familiar with and you see students using it quite easily. The pride and the unwillingness to try and try and try until it works gets in the way for a number of us to use computers at all. You find people, literally, afraid they're going to break it, where that thought never enters the head of a child who's sitting down at a microcomputer for the first time.

Perhaps not for the best, but that is still the attitude of exploration and discovery which must be there if you're going to do anything at all with computers. They are new for most of us. Most of us were not born in a generation where we had computers from the first grade on. We will have users in our libraries very soon who have them, a great proportion of our people. The discovery, the trying must be there.

I'm going to call a stop right now, because I bet it's twelve o'clock and I bet everybody's as hungry as I am.

(Break)

Gary Nichols:

I am going to make a remark this afternoon that I made once before. When I was asked at the last minute at ALA in Dallas was to introduce the panel of eight distinguished speakers when a colleague of mine who will remain unnamed got sick and couldn't perform that responsibility and at eleven o'clock at night arranged with me to pick up their responsibilities for an eight o'clock program that involved thousands of people at ALA Dallas. I don't know about you people, but I find it hard to generate myself, especially to that number of people at eight o'clock in the morning, but no one else could do it so I reluctantly agreed and my friend said, "Don't worry about it. Here are cards with all the information and you just go ahead and do it. You'll be O.K." I had my little cards on the podium and a friend of mine for a number of years - I don't know if you know this individual, but his name is Arch Lusberg - He's an expert in the area of oral communications and has worked with NBC and CBS and does coaching

for individuals who find themselves before TV cameras and all that sort of thing, whispered as I was about to start, "Get rid of those cards." And I looked at him and I said, "No way." He said, "Did you read them?" and I said, "Yes, I read them." He said, "Get rid of them. It's an insult to the people you invited here if you have to read from cards to get to know them." I said, and we're having this debate, "I don't know these people, I didn't invite them." He grabbed my cards away and so I somehow managed to muddle through and make my introductions and in fact, several people afterwards came up to me and said, "Splendid, did a wonderful job. Wonderful series of introductions, but who the hell are you?" So I failed to introduce myself this morning. My name is Gary Nichols, State Librarian for the Maine State Library. So now you know me also. I'll turn it back over to you.

Sue Epstein:

Watch out. I'm going to use that story some other time.

Back to microcomputers. I was explaining to someone at lunch, we were discussing whether I should have everybody run around the Civic Center a couple of times to wake up or whether I should just acknowledge that with transcript, as I've been saying all morning, I'm the only one that has to stay awake. Actually we were discussing how many copies of this transcript would actually be made. So maybe somebody should stay awake so you can distribute notes to somebody else.

We were talking about when you buy a microcomputer and managing it as a project. One of the things that tends to happen is that people get overly enthusiastic. They not only are going to automate their mailing list, but virtually everything that happens in their entire library. They're not only going to automate it next week, they're going to automate it tomorrow. One of the things to remember when you're automating anything is start small. Learn about the system as you move along. Take one step at a time, one facet. Even in a large integrated system in a library with many people dedicated to training and implementing the system, it is wise to implement one feature, one module and make sure it is completely running before trying to implement the second phase you're doing. However, the part that goes with that is that it is important before you ever begin the first module to decide what your files are going to look like. What pieces of information do you need. I have more than once encountered a library which has been very upset because they couldn't get information on the age of their users. They've tended to blame the vendor for not being able to provide this statistic. Well, the interesting thing is that in virtually every case, the library hadn't collected any information on birthdates or age. How they expected the vendor to automatically generate this marvelous piece of information, I do not know, whether it was going to be randomly assigned or what. Now, back on my comment

earlier about Maude and her paper file in the bottom desk drawer. When you automate, get rid of your paper files. That's what this whole thing is about. Either you trust the system you've just designed or you don't trust it. If you don't trust it, do something about it. If you do trust it, you don't need the paper. Do not try to run two systems at the same time. As I mentioned this morning, you will never find yourself saving any time. As a matter of fact, you may find yourself in the position of not being able to do all the things that you used to do. You'll end up blaming the computer.

You can't save time or money running parallel systems. For instance, if you switched from a manual overdue notice system to an automated overdue notice system such as Overdue Writer, you may have to continue writing manual notices for the books that went out before you implemented the new system, but make a clear cut date. Know when the changeover occurs. Don't run them both at the same time.

When you move to automation, create written procedures. For a group which is so concerned with the written word, it is appalling to me how much we use is based on the oral tradition. Instructions on most of the procedures in your library currently, I will be willing to bet, are based on word of mouth. The training that is given to a new employee is either some hurried instructions from the incumbent the day they're leaving the job, or something that comes from a co-worker or possibly a supervisor. Very rarely something that is written down. I find it very interesting when I go into some of my very large library clients and ask for things such as the Procedures Manual for Technical Services. There often in large libraries is a Procedure Manual for Public Services, because it's what keeps them out of trouble with the public, but they either have no Procedures Manual for Technical Services or worse, ask them for a flow chart that describes what happens in technical services, in a technical services department that perhaps catalogs several hundred thousand books a year, and they have no written record of exactly how that occurs. What makes it worse is when I ask, "O.K., if we don't have it written, then do a tour," and nobody knows what goes on six feet away from their own desk.

Make sure you have written procedures. Label the disks that you work with. Seems simple, doesn't it. You'd be appalled at how few people do that. Label everything you do. Make back-up disks. What happens in a computer is that as you're working along you take information from the master disk and you put it into storage and you work on it and then you put it back on the disk. Well, in a few of the systems that are currently developed, it will automatically put everything you're working on back on the disk every so many minutes. But, a lot of programs don't do that. When the power is turned off on your system, you lose everything that's in your current memory. Well, turning off the power sounds very innocuous, like when I decide to quit and I

turn the power off. What happens when the power goes off in the neighborhood or somebody kicks the plug out. That's the same thing. You can loose your power, and therefore, that marvelously composed piece of prose that was the answer to that irate patron and you're never going to be able to again come up with quite the diplomatic tone that tells the patron they're crazy but they never know it.

Make sure that you allow no food or drink or smoking anywhere near your computer, ever. You haven't lived if you haven't tried to take Coca Cola out of a keyboard of a delicate computer and many of us have. The particles of smoke is larger in some cases than the clearance between the reading head and the disk surface. That particle will rest on the disk and your reading head will hit it and will cause the most horrible thing that can happen in all computer down time, it's called a head crash. Basically, that nice record-type reading head that is floating on top of your disk and therefore not scratching it, hits something like a hair or a smoke particle and drops to the surface of the disk. When it drops to the surface of the disk, it's much like the sound of chalk on a blackboard, but the consequences are much worse. It takes that nice brown magnetic coating off the top of the disk and leaves the disk with a great big bare piece of metal. All of the information that was on that brown piece of coating is gone. Now you don't have any of the information. In some cases, you can work around that bare spot. In other cases, you have to throw the entire disk away with all of your hundred and eight pages of your almost completed novel. Particularly if you don't have a backup copy.

Keep proper security on your computer. We went through a very unfortunate phase where people used to put their computers in large rooms with big glass windows and signs saying "Computer Room." That's like waving a red flag, asking for trouble. If your computer is not intended for public use, get it out of public view. The computers that you buy when we talk about microcomputers have a high resale value. They're very susceptible to theft. Don't advertise the fact that you have got one. You think that because you have a microcomputer, you are very progressive, you should let people know how progressive you are, but that is actually a bad move because you are asking for theft. Put it in an area that can be secured and locked. If you're putting the computer out for public use, there are devices that can be used that are put on the table top that lock the computer into its place and in essence, you can't take the computer without taking the table, which makes it a lot more awkward to walk out of the building with the computer. They have proven to be comparatively successful in preventing theft. Remember that you may think that theft is not something that is going to occur very often, but I think that there are two things that I, one piece of information that I've known for a long time and something else that I picked up in the paper just the other day, that I think you should remember. 3M sells microfilm

readers to all sorts of institutions, including libraries. They have a model 400, they also have a 400L and the 400L is sold to libraries. I asked someone one day what is the basic difference between your 400 and 400L. The basic difference is that the lens locks onto a 400L. It doesn't on the 400, which they don't need to do in a lot of business. Lest you think that Maine is an exception, yesterday morning's local paper in Waterville had a story on the increase in employee theft in the state of Maine and all the companies who thought that they wouldn't have problems here and, indeed, do with pilferage and shrinkage. It happens everywhere.

I will tell you that on the other side of this horrible mountain of implementation it's always better. Even in the midst of it, there are many days when you will rue the day that anyone ever mentioned automation, but, remember that things weren't perfect before. There is a tendency to remember everything as being perfect. No cataloger ever made an error, every book was perfectly located, every circulation record was perfect, everything was in its place, and that's not true. The only real difference is that everything was hidden before. There is nothing quite like a microfilm or even worse, an online catalog, to show up all the errors that are in your current cataloging that are hidden, because people don't see things the same way when they're on separate 3 x 5 cards. Keep a few things in the back of your mind if you're the project administrator, that people have always been complaining about, so that when things get really bad and they say, "Things were better before," you can bring them up.

I had the unfortunate, but very challenging position once, of moving into a library which had grown from a city population of 8,000 in 1960 to 100,000 in 1970 and 150,000 in 1975. When I joined the library, I followed a cataloger who had read every book, cover to cover, before cataloging it. At the time, I was charged with supervising all automation, including their new circulation system and new COM catalog, being the assistant supervisor on a new 72,000 square foot building, and creating an opening day collection of 150,000 volumes. I had two years to do all this. I explained to my staff that I considered a certain error rate quite tolerable. I had a lot of problems with some of my staff members who kept remembering the days when books were read cover to cover before they were cataloged. As I explained that a certain error rate was perfectly acceptable because of the costs of reducing that error rate, I still met very hidden and very nice, but nonetheless, real resistance. The greatest breakthrough occurred the day that one of my staff members came in a said, "I think I found what you've been looking for." And I thought maybe she had found twenty more staff members hidden in the closet, but what she had found was that in pulling catalog cards for a book that was going to be discarded, she had found an error on a catalog card that had been created by the cataloger who read every book cover to cover. I thanked her profusely and posted the card on the my office door and never said another word and all of a sudden all the complaints disappeared. But do remember that things were not perfect before.

It may take you as long as it took me, but in almost all libraries, it doesn't take this long. There is a tendency, unless they are the very same people, for the person who created the catalog cards and put them in the catalog to believe that the catalog is perfect while the people who are using the catalog know such things have occurred such as the student who took all the subject headings on whales and left them over with all books

on whales. We were all very grateful that he left them with the books instead of taking them home with him.

Actually that happened in the particular library I was in, where we discovered in reading the collection, that every subject heading that had anything to do with either nuclear or atomic had been removed during the late 1960's as part of a demonstration. We had no subject headings for any of those. It's easy enough to re-create author or title cards, if that's what you're missing. It's almost impossible to re-create a set of subject cards.

When you're looking at this, costs cannot be ignored. It's important to look at what it costs currently to do something and what it is going to cost in the future. Even if cost is not the primary criteria that you're using in making your decision, it is still important to know what those decisions involve. With my very first library job, (I did libraries after I did data processing and economics and a few other things like that), I came in with an analytic background. It just happened that the staff I joined had no one with an analytic background and they were very happy to let me do a lot of things that they had sort of neglected over the years, until I started asking the question of how much does something cost. What I found interesting in this particular setting, was as soon as I asked how much something cost, the immediate assumption from staff members was that I was trying to get rid of it. That I never would have asked how much something cost unless it was something that was on its way out. Otherwise it was something akin to God, motherhood and apple pie, that we weren't going to question how much it cost.

We don't know what things cost today, and even when we attempt to do it we very rarely include all the costs. We forget that when we pay salaries, we also pay benefits and that's the real salary. It's not for nothing that when accountants talk about those benefit costs they call that the "burden." There are some jurisdictions in this country where it's an appalling figure approaching 100% in salary. In most of your cases it's not and in most cases across this country it is not, but it is a real cost. The other thing to remember it that there is no such thing as a free lunch. If Mary has an extra hour in her day and you give her this job to do, it doesn't mean that this job doesn't cost anything. It still costs Mary's salary, because what you have done is that you have made choices in what you are going to do with that money and with Mary's time. Pretty soon, give Mary so many extra jobs that we have to hire a half-time person to do the other things that Mary was doing before. But Mary's time always costs. And so does that of a volunteer, because you're always making choices as to whether you do this or whether you do that. And you should know the cost of doing those two alternatives. We have staff costs that tend to be rising. We have utility costs where the costs tend to be rising. Paper products where the costs tend to be rising.

Now, sometimes when you figure out how much something is going to cost you, you use what we call "displaced costs." Those are costs that we wouldn't have to pay, if we did this. And usually you can get away with that doing budget justifications if it's real hard dollars. We won't have to pay for maintenance on this product because we are going to have to pay maintenance on this other product and this is cheaper. When we try to use displaced costs for people who are still going to work for you, most jurisdictions and financing agencies won't buy that, but it is a good internal tool. What I mean by that is if you have one person on your front desk and you find that they can do this particular job faster and you say, "Look how much money we can save with that person who is still going to spend eight hours on the front desk," it is debatable, depending on how you count your money, and we use the term "hard" and "soft" dollars, whether or not that can be counted.

The other thing that we sometimes use automation for is the avoidance of future costs. If you're in any kind of growth situation, or if you're looking at something where you know the costs are going to increase, then the avoidance of costs in the future can be a very good reason for putting money into new equipment today. Particularly, look at the next five years. What are you going to be doing in five years? What's going to happen to the costs? Even if what you are doing is looking at a service benefit, know the cost of what you are talking about, because somebody is going to ask you, in the first place, and secondly, it's good for you to know.

If you decide that you are going to acquire something, and now you've done all this good work on defining your needs, you need to find out what software will accomplish those needs. And at this point, it is very important to get those needs down on paper with all of your vocabulary defined. All the terms you're using defined, because you're talking, in most cases, to vendors who don't understand libraries at all. And things that you accept as standard are most likely not understood in the same way by the person from whom you're buying. This holds true whether you're buying a microcomputer, a minicomputer, or a main frame. Be precise, define. Even when you're working with vendors who only deal with libraries, the assumptions that one library will make about what is standard practice, are really funny sometimes, because it will be diametrically opposed to what another library has just assumed is standard practice. A vendor may receive two requests for a proposal on their desk the same week asking for features that are described as standard. When they go investigate as to what those standards are, they find that they bear no resemblance to each other. The libraries are always surprised.

Request For Proposal is the device that is used in purchasing which says, "Here's my problem. Propose a solution." It varies from a Request For Quotation which says, "Here's is my solution. Give me your price." Now, in the microcomputer procurement

role, what you might use is Request For Proposal in order to find the software that will fit what you need. And the Request For Quotation when you say, "I want a piece of hardware with these components and this configuration, that will run this piece of software." But know the market place before you ever send out a Request For Proposal or Request For Quotation, because you need to know what's realistic. You don't want to force the vendor to overpromise.

Bob Walton who is the automation consultant for the Texas State Library, has a classic line which he has used, which I frequently use, but I do give him credit, which is "Will Rogers may have said he never met a man he didn't like, but then again he never met a retail computer store salesman." Cultivate one, if you find one who's good, who's honest, stay with him. And it doesn't matter if he's a little more expensive, because you'll gain, by far, in the long run. Be careful of promises. It's what is available now that has to meet your needs. Anything else that's coming in the future should just be extra, pure gravy. You've got to have what you buy now, meet your needs now.

If you buy microcomputers, for heaven's sake, unless you're an expert, don't buy by mail. Buy from a local vendor, he'll stick with you. You need somebody who you can call up and say, "It doesn't work, I don't know how to run this program." In addition, if you play your cards right you can sometimes get a better deal from a local vendor if you emphasize the fact that you're working in a public setting, where he may get some other business from your client who may become his customer. You're probably going to work with this vendor for several years, so make sure it is somebody you can work with and that you trust. Watch what they say. Watch for weasel words. Watch for terms that don't exactly mean what you think they do. Do not be afraid to appear ignorant by asking questions. The truly ignorant person is the one who won't ask the question.

I have a classic example of a response that used to be used in certain turnkey vendors responses which is not used today. I still won't identify the vendor, but it's a true classic. The expression goes, when you ask for a feature, the response would come back, "Provision has been made for..." whatever the feature was. The library reading the response would make the assumption that that meant that the feature was available. In actuality, that was the exact opposite of what it meant. What that phrase meant was that if, in our wildest dreams, we ever decide to implement that feature, we have not yet done anything to the system that would preclude our using that feature. That's what "Provision has been made for..." meant. The classic example of weasel words.

Be very careful of creative uses of present tense. Don't assume anything. If a vendor uses the word and it doesn't seem to fit with your knowledge of what you've seen, ask. Now, when you get

down to writing actual contracts, make sure that everything that you thought was a weasel word or a creative use of the present tense, or anything else, it's very important to get it down in writing. There is no such thing as a verbal contract, even from a guy you think is a really great guy and you think will be around for a long time. Even if he is that way, he may sell out his business next month and the contract may be taken over by one of the real shysters in the business.

How do you learn about microcomputers? Well, one of the things that you try to do is you find out who is already using it and you pick their brain as much as possible. Then you haunt the computer stores, particularly software stores. See what's going on. If you've got a computer club in your area, start to attend it or send some staff member, but make sure that somebody starts to make contact with those people. Read magazines. There are a number of good ones on the market right now in the field both for libraries and general purpose.

Now, what's happening, there are at the moment, Small Computers in Libraries, used to be put out by University of Arizona Graduate School, currently put out by Meckler Publications is probably the best for general use, particularly office use of a microcomputer in the library. The publication Access which comes out of Oregon, which comes out quarterly, appears to be having a great deal of trouble now in getting published. I haven't received an issue in quite a long while. There is another one called Online Libraries and Micro Computers which is very good for use with public services. They also have some technical services hints. The general purpose magazines are in a state of flux right now. We used to have a number of them that were about all models of microcomputers and what's happened is that they sold quite a few in the beginning and now that people have bought a chosen model, they're changing their subscriptions to a computer magazine that fits their model better. Such things as Byte and Personal Computing are still quite viable. If you have a large group of patrons who also are interested in microcomputers, such publications as InfoWorld which is a weekly, are also valuable. InfoWorld, fortunately, has gone from a tabloid newsprint format to a slick paper one and they also have cut their size dramatically which makes it possible to read it all once a week. Up until then, it was mostly just used for fireplace fuel.

There are lots of good books, more coming out every day. There are several in the library field that I highly recommend. One of them which has a lot of very practical hints is the book by Bob Walton, Microcomputers: A Planning and Implementation Guide and it is published by Oryx. Knowledge Industry Press publications has published a book written under the auspices of ASIS, the American Society for Information Sciences written by Larry Woods and Nolan Pope. [The Librarian's Guide to Microcomputer Technology and Applications.] It also has some very good background

in it. There will be new ones coming out all the time. Some of that on Interlibrary loan couldn't do any harm.

Classes, seminars. Learn as much as you can. The more you know, the more you are going to be able to avail yourself of the benefits of the microcomputer. Let those in the community know that you are looking at microcomputers and enlist their help. You'll probably find a couple of people out there who are really interested in microcomputers. Now, there's one problem with that and it's actually something that the whole microcomputer industry has fought, and that is the well-known hacker, the hobbyist. The person who really liked this whole field a lot better when you had to build your own from scratch. A few chips and a couple of wires and a cardboard box or something, when you built your own Heathkit microcomputer. In the beginning these were just the people that computer stores hired. And a couple of years ago, they found that their sales projections were nowhere near as high as people thought they would be. Their actual sales were not as high as their projections. What they were discovering was that they had the wrong people selling computers. The hackers were selling to hackers and the great market that everyone was envisioning was you and I. The great group of people who want to use a computer rather than build a computer, and it's important to get in touch with the people who are using one, not the kind that get all enamoured with different kinds of chips. There's nothing wrong with that, but that's not all you want to do. Again, you must be willing to be a beginner. It's a clean slate. There's nothing wrong with not knowing a lot about microcomputers.

Back in that same issue of Newsweek I quoted before, they said, "Personal computers have the power to take a limitless wealth of knowledge out of the sacristies and put it at the disposal of the masses. Already a generation of children takes the technologies for granted and is growing increasingly comfortable with its use. To them, the long heralded information age, whatever it brings, will become a reality." Now, when I was first doing some work on a speech on microcomputers, I was also reading the novel Cinnamon Skin by John McDonald and I would never have thought that I could have tied those two together, but I did, because he describes visiting a city and he said, "I saw a perfect distribution. The future managers and the future managed ones, twenty in the computer store, 200 in the arcade. The future managers have run past us into the thickets of CP/M, MBASIC, COBOL, FORTRAN, PC, Apples and worms. Soon the bosses of the microcomputer revolution will sell us programmed units for each household which will provide entertainment, print out news, purvey mail order goods, pay bills, balance accounts, keep track of expenses and compute taxes. But, by then the future managers will be over on the far side of the thicket, dealing with bubble memory, machines that design machines, projects so esoteric, our pedestrian minds cannot comprehend them. It will be the biggest revolution of all. Bigger than the wheel, bigger than Franklin's

kite, bigger than paper towels."

Now the whole use of the public and microcomputers is another field that libraries are getting interested in. It's scary enough to think about using one yourself in the privacy of the back room of the library. But, now what happens if you put the microcomputer out there and you say to the public, "O.K., either put in your quarters and run it or it's there for free," and they would say, "But, I don't know how to run it. Can you show me?" That's terrifying, because all the mistakes you could make in the privacy of the back room are now very visible. All those things I was talking about before with the reluctance of adults versus the enthusiasm of children for trying new things come really into play when you now have to help somebody in the public to learn how to use a microcomputer.

Now, there are several major projects going on across the country in working with the public in what is being called "computer literacy." Despite some of my apparent biases towards the use of automation, I am, to be quite frank, a little concerned about some of the emphasis on computer literacy when we haven't tackled the basic question of reading literacy, but nonetheless, this goes on and I will give you one heartening piece of information which is that the California State Library last year put two hunks of LSCA money into two different literacy programs, one called Computer Literacy and the other in joining the Literacy Coalition and setting up numerous literacy centers in public libraries and beginning to really push regular literacy, so they are approaching it on both fronts. What we are aware of right now, is that we don't know how many people out there want to learn about microcomputers, but it's very clear that we have a growing public awareness.

I want to make some analogies between the current computer industry and the automobile industry. This is not my earlier analogy about how small it's getting and how cheap, but back when automobiles were new, you had to be able to know how to fix an automobile to dare drive it. You wouldn't dare take an automobile more than a couple of blocks from your home unless you knew how to fix it. You had to have strength to operate it and to run the crank. There were many small companies which made automobiles. There were entrepreneurial companies, some of them were later absorbed into larger companies and some of them absolutely disappeared. When we go back into the museums or to the early books on the history of the automobile, the names are, first of all there's a long list of them, many more varieties than we possibly have available today, but also some of them were also almost romantic in their historical connotations. Before we could get to the point where we could really use the automobile, we not only had to have mass production and everybody who's taken American history knows about Henry Ford and what he's done for the United States, but in addition, we not only had to have the automobiles, we had to have the roads. Until we began to connect

communities with roads, we did not have a viable automobile industry. I still find it amazing that you can drive out of Fairbanks, Alaska, and every one of the roads stops. It's hard to think about living in community where in essence the roads go nowhere and yet, of course, people do drive in Fairbanks.

To get the microcomputer to be as accepted as the automobile, which I think is going to happen, we have to get the microcomputer to the point where it is like the automobile. We use it as a tool. I make no bones about the fact that I have decided of all things I have to learn in this world, learning how to repair an automobile is not one of them. I know a number of people who repair automobiles, who do a very good job and enjoy it and consequently save a lot of money. I decided that was not my job. My job was to investigate and locate the best mechanic in town. I get in an automobile, turn the key and use it. I don't really know how it works. We must get to that same stage with microcomputers. And, frankly, as long as we allow the hackers to control the way we use the microcomputers, we're in trouble, because they're the ones who want to get out and fix it.

Interestingly enough, in North Carolina last year the State Library sponsored a microcomputer camp for librarians. I know, it's better than the man who had the summer camp for Cabbage Patch dolls this summer. He really did and he charged some exorbitant fee and kids sent their dolls away to camp and he wrote letters home twice a week, which shows we're all in the wrong business. In this microcomputer camp, which was at North Carolina's magnet high school for science and mathematics, which is a fantastic thing promoted by their governor. We were talking yesterday about the governors in various states and the incredible job they've done to encourage more money and more resources for education. In North Carolina, the governor has been particularly forceful in that area and he has formed magnet schools which are residential campuses for extremely bright high school students, providing the services they never had in North Carolina before.

Anyway, they met on this campus because they did have the microcomputers available. What I found interesting from the report of that two-week experience is that there were a number of tracks of what people could learn, this is for library people. There were tracks on word processors, spreadsheets, Data Base Managers and specialized library programs and also on BASIC, which is a standard programming language. In the evaluations that came back from this camp, the one thing that was almost universally suggested was that the course in BASIC be dropped from the curriculum. In these two weeks, if these people were going to learn anything, the one thing they didn't need to learn how to do was programming. What they wanted to learn was how to use the resources that were currently available. Back to the whole concept of I-want-to-use-this-as-a-tool, I-don't-want-to-learn-how-to-fix-it. Now, again, since my whole professional career

began as a programmer, I have nothing against programmers, but, there are times that you really need to know, to be able to use this as a tool is much more important. Interestingly enough, I think we have to get to the point where we accept them much as an automobile on obsolescence. I was talking about getting rid of computers in five or seven years. We have to think of them as getting a certain number of months on them, akin to a certain number of miles, and trade them in. There will always be those people like myself who keeps a car for a minimum of ten years, but there will be others who trade them in every year or two as a new model comes out. We probably will end up with some sort of market for used computers, although it will never be as much as the market for used automobiles, because the utility, frankly, is dropping off fast.

We're going to have several levels of public use and the first one, of course, is the games and hobby level. It's one step up from the arcade, but there is a lot of potential in that market. The educational computing that is being done today is very interesting. It is using some of those techniques to teach children very real things that look like they're learning games. I watched some children one day playing a game which involved shooting missiles off the surface of the moon to knock down various orbiting devices and it looks, in its concept and its general description, very much like an arcade game, until you realize that the children must calculate angles and speeds and trajectory in order to be able to play this game. There is a great deal of mathematics involved. The kids are unaware of the difference between it and an arcade game, but it's very much there.

They go up to the personal computer, and again, this is one of those lines that's very blurred, something that is used by an individual in their home. Now, I don't have a whole lot of credence with the people who say, "Buy a microcomputer so you can organize your recipes or you can balance your checkbook." It's a whole lot more trouble to balance your checkbook on a microcomputer than it is in your checkbook. Then we see a lot of computers used in small business. Either at a business or as a business would use it but in a home. We're seeing a lot of use of them as intelligent terminals, as I mentioned earlier, to either be used alone or to access a large database. Again, there's never a best computer, it all depends on what you're going to do with it. The public needs to be taught the same thing. They're going to start coming to you for the same kinds of information about computers as they're coming to you for information about washing machines. Are you ready?

How can you help someone right now, who comes in and says, "I'm about to buy a computer. Which one's the best?" Well, just as you may not tell them which brand of washing machine to buy, you should have something available to them that will give them the information that they need, just as you would hand them a

Consumer Reports or something.

How do librarians help with public knowledge? Well, first of all, is the whole familiarity. The more we're familiar with them, the more we can help the public. You can help them a great deal in separating the hype from reality by providing the right materials. They need to become competent consumers. It's the only way we're ever going to weed some of the charlatans out of the business. Again, this whole thing of what kind of books, and journals, and video tapes do you have available?

What about the concept of public transportation, if I'm going to keep my automobile analogy, for those who can't afford their own. I think we have an era coming where much when the telephone was new, we had the telephone in the homes of the wealthy and businesses and most people used the telephone at the general store. I see an era coming when the library is going to be the general store for many of these things, such as the micro-computer, such as access to databases through microcomputers. Again, we'll get into that in a minute.

The public is going to need help with access to remote sources even if they're using their own computer and their own password. They need help evaluating which sources to use. They need help with equipment selections for modems and software for specialized searching. Sometimes the library will have several models of microcomputers and can help people in purchase decisions, by allowing them to use several. There are some interesting problems attached to this. First of all is helping the public with this needs question. Again, the checkbook balancing is not a great reason to buy it, and furthermore, another great reason not to buy it is because the television ads say that if you don't get your three-year-old using a microcomputer, they'll never make it to Harvard Medical School. I personally am highly offended by those ads because I don't think they are encouraging the part of computing that we want which is the part that has to do with thinking. The kids are too young to be doing that kind of thing. The computer helps a lot with helping people learn how to decisions are made and to break the decision-making process into a very concrete process. Again, I don't think that's appropriate for three year olds.

Another problem we have is we've put coin-operated microcomputers in libraries and we print the success stories, but I've also been in a lot of libraries where this is not been successful. The public has not put enough coins into that microcomputer to pay off the monthly rent. And indeed, what the library thought would happen, is that they would pick up a lot of free hours using the public's quarters to pay for the system. Well, I think one of the problems is that the ticking dial, with the quarters going away, is not an ideal situation for learning how to use the microcomputer. You really need several hours to play with it, so if you are already a user, and you happen to be in a place or

situation where you need one, but you don't happen to have one of your own, perhaps you could use a coin-operated. But, it is much like coming to the library, having the library remove all the caps for the keys on a pay typewriter and covering them with blanks and saying, "Go ahead and type. It's going to cost you a quarter for 20 minutes," and you don't have any idea what those keys mean. I think we've seen a lot of libraries using coin-operated typewriters and having them make money for them, but I don't think we've got quite the same situation because of the lack of knowledge on the patron's part.

Copyright. There's an incredible amount of piracy going on right now, of programs. The arguments fly thick and fast on either side. There's one that goes, the software manufacturers charge too much, therefore, there's perfect incentive to steal because nobody can afford \$500 for a word processing package, particularly in situations where you may have more than one user, and schools are a good example of that. On the other hand, a computer manufacturer will say, "It is now costing us hundreds of thousands of dollars to advertise these programs and the piracy has gone up so high that you're forcing us to charge that much." I don't know that we have an answer right now. I have a feeling that one of the answers is going to be the fact that we're going to see the cost factors change. I think that we'll see the prices of the individual programs go down, but I think we're going to see the price of blank disks go way up and I think that the manufacturers and programmers are going to start getting royalty sales of the price of blank disks. We, of course, have too many programs and too many models of computers available now for the market to really settle down. I can't tell you which ones are going to fold, if I could I'd make a million dollars in the stock market and wouldn't be here. But, I think what we see is that there will be a settling out, much as there was in the automobile industry. We in libraries are going to have to develop a lot of staff expertise. Much of what's happened is in having to develop reference service expertise and I don't know where that's going to come from out of already tight staffing and tight budgets.

What that means is that library programming costs and staff allocations must change. But, is your library willing to do it? Particularly in advance of demand. But on the other hand, we have a new segment of users. Are they also going to use our traditional services or is this all they're going to use? And are we therefore not the appropriate spot for them to learn this? Or do they start making "unreasonable" demands? Unreasonable, of course, being defined as anything we haven't done before. But, if we ignore this segment of the user population, do we lose their support as a viable public agency? Now, obviously, I don't have any answers to most of those questions. I see some directions, however, the market will take. More people, obviously are going to own these. Fewer hardware sources and

we'll see more software sources, more places that you can get software. I think we're going to see the prices come down, the features go up. That's very clear from what's going on now. And we're going to see a slowing of the actual home computer market. I think that's reaching a saturation level of the person who is just buying it to do the checkbook type of balancing. Until they have a greater need, I don't think they're going to buy them any more.

Now, lest you be really concerned about what all this means, I've got to tell you a story. About ten years ago, I introduced a COM catalog on microfilm in the library I was working at. And the screen was displayed in such a way that it was, quite frankly, very difficult for people with a certain type of trifocal to read it and all of the reference staff had been alerted to watch out for these people, who could be very easily discerned by the strange way they held their head and to offer to help them. Well, at the time I was doing some of my own work on patron catalog usage and behavior and so I used to spend a lot of time haunting the reference area and one day I saw a very elderly woman, certainly at least mid-eighties, with her head in this strange position, using one of the readers. So I went over and offered to help and as I was searching for the material she wanted, I started talking about my new toy. I was very, very proud; it was one of the very first in the country and it was really my baby. And I made a comment about "isn't this exciting, it's so new and different." And she looked at me and said, "My dear, I am eighty-six years old. I have seen the advent of the automobile, of the telephone, of the radio, of the television, of the airplane, of the jet and of the trip to the moon. What makes you think this is so exciting?"

Whenever things have gotten really tough or whenever I am thinking that we have reached the ultimate in technology, that woman has proved a very good lodestone for me. I think what I would like to do, I can talk much faster than you can hear and so if we get down towards the end, that's what we may get to. I have a son who speaks much more rapidly than I do and we were teasing him one day about what he was going to do because it might handicap him if he ever decided he wanted to be President of the United States. And he said, no, he didn't think that would hurt him at all because if he was ever elected President of the United States, he would just require that everybody take a speed listening course and we would get a lot more done.

Retrospective conversion means the putting of material, of information about the materials you own, and the patrons which you have into a form that can be used by the computer. Retrospective because you usually have to go back and do all the materials you acquired before computers were ever around or certainly before they were around in your library. Now, this can vary in complexity. From a very large Association of Research Library's library that may have millions of volumes, many of them acquired

before 1900 which they probably will never put into full machine-readable form to a special library which was created in 1984.

(Turned tape over).....

Many libraries used OCLC for cataloging and acquired the archive magnetic tapes to eventually load into automated systems. Of course we never checked to see whether we could read the magnetic tapes that we got and we never did anything about taking care of the discards. But, those are minor problems. When you create the database, remember it's going to be used for multiple purposes. You may be planning to use it for circulation, in which case, you need very short records. But what happens if four years from now you decide also to use it for a public access catalog and now you need subject headings. I have said before, I think even in print, that the second worst thing that can happen in your library career is a retrospective conversion. The worst thing that can ever happen is doing it again. There are lots of libraries that have, and it primarily comes because they never thought through the problem in the first place. Now, you're O.K. if you use some national standards, if you stick to AACR-II and full MARC records. Don't throw any piece of the MARC record away because you're sure you'll never need it. You will, much sooner than you think.

Remember that I talked about storage getting cheaper and cheaper. It is much cheaper to store the full record than to get rid of little pieces and to later have to go back and do another conversion. In one particular case I was working, where we had a circulation system which had subject access for staff, one of the administrators was very much against using full MARC formats. He had been told many years ago that it was too expensive to store MARC format and was convinced that this was still true. So, after fighting, we'd get the whole issue settled and quieted down and we'd go blithely ahead and two months later he'd say to me, "But, we shouldn't be using the MARC format," and the whole argument would start over again. So, finally I decided that once and for all, I sat down with him and I said, "What element of the MARC format are you proposing to get rid of?" Well, of course, he wasn't too sure. So I brought out a handy dandy cheat sheet I've got. I don't do any advertising of commercial products, but this is almost a service, not a commercial product. For any of those of you who do use the MARC format, Library Systems and Services in Rockville, MD, has created this reference card for MARC formats. This is MARC Books. They also have one on MARC Serials. They cost \$3.50 and they're indispensable if you use MARC. So, we sat down. What pieces would he like to pull out? Well, he wasn't too sure so he figured it out and I realized that we save less than 3% of the storage space in his very large computer by getting rid of the elements that he wished to get rid of.

When I explained that the difference that made was that perhaps

his system, which was a five-year system, would run out of storage space two months before it would run out otherwise, under the worst case, he went along with me on MARC format, but he's still not convinced. It's vital because you never know what you're going to need it for and furthermore, every commercial service which you hope to buy uses the MARC format. That's the way we exchange records back and forth. So if you have MARC, your cost in using any other service will be considerably less.

If you must use short records, for one reason or another, or if you are currently doing cataloging right off the CIP in the books and you're typing your own catalog cards and you'll never have a chance to get into automation, do me one favor. On your shelf list or your catalog card or whatever record it is you keep about the books, please write down the Library of Congress Card Number and the ISBN, the International Standard Bibliographic Number. The reason you're doing that, aside from pleasing me, is that when the time comes when you join a consortium of some type that uses bibliographic records, those numbers can be used to be matched against other full MARC records.

Now I sit here and everyone is nodding and people are taking notes and I could get real encouraged, except that I've been saying that for ten years now. I started out stumping up and down the state of California and now I stump all over the country saying the same thing. I started working for a client in California recently that has no machine-readable records and I was really encouraged because their people had been coming to speeches I'd given for so long that I was sure that they were going to start getting up and leaving in the middle of it because they'd already heard it before. I went to their shelflist and you know, none of them, not one had an LC Card Number on it and it just doubled the price of their retrospective conversion. One act! and the thing that you worry about is if you say, "Well, we catalog a few books a year." If this library, a public library, had started ten years ago, a large percentage of their collection would have had that and how little time it would have taken at that point, to add that piece of information to the shelflist. They didn't and that probably cost them double what it would have cost otherwise.

We have some problems, and it's bad enough with books, but then we have other types of materials which make it even worse. Non-book materials have limited records available in machine-readable form. We have some problems because in, for instance, OCLC all the MARC bibliographic formats are used, but in many of your libraries, you don't make any distinction between the type of materials you have and you may catalog something which you consider a book, a monograph, which the people who are cataloging for large libraries consider a serial. You can get into some real trouble. Don't worry about those, just talk about the bulk of the collection. And then, of course, we have ephemeral material. Those paperbacks that you buy from the newsstand stock

that go in and out, but as soon as they're worn out, you throw them out. You don't do formal cataloging on it and you certainly don't want to include those in your machine-readable database. Those pamphlets that you may get for free. There are special ways you can deal with those. Again, I'm going to talk about primarily the major materials which are the monographic book materials.

Richard Coward of the British Library has said, in referring to the possibilities of having online catalogs in general, "Until total conversion is done, the system is semi-operational and relatively inefficient and that will always be for any library." What we do know is that the public will never go to more than one place to find the information about your library holdings. No matter what you do to encourage them. The University of California has a marvelous online catalog which if all of us had nothing but money we should all replicate. Great catalog. Cost them a bundle, but it only has a portion of the collection from each of the nine campuses. Its first version was a prototype. They are now in production, but it still has a very small percentage. There are large signs on the terminals and as part of the MELVYL system itself explaining this fact. When they put in MELVYL which has the holdings of all nine campuses, the number of interlibrary loan requests jumped dramatically and everybody got all excited. They thought that this was really going to share resources between the nine campuses which was one of the things it was intended to do in order to cut acquisitions budgets. Well, what they discovered at Berkeley was that 75% of these requests that were coming in from MELVYL were indeed already in the Berkeley library but they were not on MELVYL, they were in the card catalog, because they had not yet been converted. Despite all the signs, all the training, people weren't looking.

A little different story: Purdue's Engineering Library was one of the very early users of OCLC and they went back and converted every title that was published from 1970 forward on OCLC and then created a COM catalog on microfiche that was upgraded and reissued quarterly. Well, they decided that there was a problem having cards from pre-1970 materials and microfiche for new material so they decided to try to compress it. They didn't really want to do a full retrospective conversion. Instead, they microfilmed the whole catalog, the pre-1970 catalog. Just microfilmed it static with no chance of ever changing it and put it in a pile next to the microfiche reader. On the other side was the new, dynamic growing catalog. They did a lot of signage. They did training. They made special requests to faculty offices and they thought that this was working really well, until they analyzed the year of publication of the books that were circulating. Then they found that the year that was most popular for circulating books was 1969. Now this is scary to me because this is an engineering library and this the late 70's. What was happening is the users were going to the microfiche reader, finding the largest stack and using it, despite the fact that the

new materials were sitting in a stack at the same reader, right next to them. They were not using them. So that, for most of us, trying to really think that an online catalog or even for that matter, one that will be created from machine-readable form such as the COM catalog, they will not replace your current catalog form until everything is converted.

On the one hand that's sort of frightening. On the other hand it makes it real easy because there's hardly any decision to be made. It really has to be everything and it will take a long, long time. Now, what kind of sources do we have for doing this. Well, you can sit down at your OCLC terminal or somebody else's OCLC terminal and do retrospective conversion. Basically what it means is you buy a special account that says, "I mean it, folks, I'm not doing any current materials this way. I already have a catalog card for these books. All I want is some information on magnetic tape for these and for this you're going to give me a nice cheap rate and I'm going to do it at times when you're not as busy as you might have been otherwise." Well, unfortunately for this technique, first of all you're about four years late because you used to be able to do it for nothing. The second problem with this is that you're what we call terminal-bound. If you have one OCLC terminal, one OCLC terminal is as many as you can use. It doesn't make any difference if you have three trained operators in the building, one at a time. You're also bound to the response time of OCLC during that particular segment and although OCLC has gotten much better, there have been times when their response time has been very slow.

On the other hand, you have both the documents and the books sitting in your library. There's very little uncertainty as to which book you're really cataloging. The other uncertainty removed is the question of whether we have really matched the book and the record, because this is all done with intellectual effort. Someone is sitting there actually making the decision that this book, this record on OCLC matches whatever document I'm using. Whether it is actually the book in hand. Whether it is the shelflist. Whether it is the main entry card from the catalog.

There are some variations on this scheme where in essence the technique is that you see the record and you match your document or your book to the record. The variation on that says that you use the same sources, but instead of you and your staff and your terminals doing this, you let someone else do it. Whether that someone is a regional library, whether it is AMIGOS, the network that runs out of Southwestern United States and does provide commercial retrospective conversion services onto OCLC or whether it is OCLC itself. Now, in those cases, of course, you pay a lot more than if you do it yourself, at least in what we call hard dollars because you're paying an outside source for the labor to actually do it. And you will still get back a number of blue-jacketed shelflist problems that they were not able to resolve.

Things where you have to go find the book and it will be resolved then.

This is not a good technique if you have a library with a great deal of age where you have lots of little conventions over the years which you may forget to explain to the source when they do the conversion. For instance, a library I know that used to use a red star in the upper right-hand corner of the shelflist card to mean reference but never told the people who were doing the conversion that that's what it meant. All their books came through with call numbers missing the reference designation.

The next type of retrospective conversion is to, in essence, bounce your work off of a known database. Whether this is a database which you can see or whether it's a database where you send off search arguments (I'm going to define these things next), it's still the same type of technique. In this case, what you have is a situation where you put information in some format. Whether this format be information you put on a floppy disk, whether it be put on a paper that you type with a special font in an IBM Selectric typewriter called Optical Character Recognition, whether you send the documents themselves, whether the documents are microfilmed, whether the documents are microfilmed and sent to the Philippines for keying and then brought back, whatever, the technique is that your records are matched against a known database.

The most popular one of course, to match against, is the Library of Congress MARC database. The second most popular is large library databases of libraries of the same type as yours. A number of them are currently available. Virtually every large California public library, you can use their database. Denver Public had probably the most nitpicking cataloger I've ever encountered, as their head of cataloging for 30 years. I would have hated to have worked for her. I would have hated to have been her boss, but I'll tell you, using those Denver Public Library records is a joy. And they're available from several different sources.

The problem with using this type of retrospective conversion is that in the matching, errors can occur. If you have the shelflist with the LC Card Number or the ISBN on it, the number of errors drops. Now, the LC Card Numbers, as you're quite aware, have an error rate of maybe up to 10%. That comes primarily from the publisher. A publisher being assigned a nice Library of Congress Card Number for a given book may decide to use it in everything he publishes that year. The publisher who uses the same LC Card Number through sixteen editions of the same book, where indeed, you're supposed to use a new one for each new edition. The publisher who takes over the rights of publishing another publisher's book and keeps the LC Card Number of the original publication. Of course you get the wrong publisher and the wrong date and all that sort of thing. Despite all of that,

it is still better than the other choice which is to match on author/title.

Let me get back to ISBN. ISBN's are much better numbers to match up on than are LC Card Numbers because they have embedded in them a computer device called a check digit which means there's a digit in the number itself which is computed by a machine which prevents you from doing such things as transposing digits. The only catch with ISBN is that they have only been used extensively since the mid-1970's and most machine-readable databases don't have a high percentage of titles with ISBN's in them. But, a combination of LC Card Numbers and ISBN will do you well. If you have to match on author/title, the most prevalent problem is picking up both the British and the American edition and having to distinguish which one you have. Well, in most public libraries it's really easy. I used to put a clerk at that. I'd just say cross out every British edition. I don't care whether we own it or not. The chances are so slim that we're probably O.K.

The more insidious type of problem is one where there are a number of different books with the same title, a similar title and a similar author which are really not the same. Or when we match, we don't really match letter for letter, because of some of the problems involved, we usually match in what are called "algorithms," formulas which are derived from author and the title, a certain number of letters from each of those places depending on the vendor you're using. And some of them can cause some problems. That doesn't even begin to mention the problems that are caused from my two favorites. One is the children's book series by Carla Green called I Want To Be A...... It happens that in most of these algorithms, everyone of her books has exactly the same algorithm and she has published 150 some books. So it's completely unknown which one you'll get when you hit. The other one that can cause problems in the same degree which you may be a little more familiar with are the Chilton's Automobile Repair and Tune-up Guide for the...... They again have the exact same algorithm for everyone of the multitudinous books that they have published. Those two aside, however, it is a good technique, but it does require post-edit, meaning that the work is a little easier going in, but there is an edit phase at the end which does not occur if you use a technique such as sitting down at an OCLC terminal.

Another technique which is being used in several states is to formulate a statewide database of some type or a systemwide database of some type and to match your holdings to those of the other libraries, creating new records for those titles which are unique. Probably the most interesting place that this is occurring is in the state of Wisconsin. In the state of Wisconsin there are approximately 70 libraries of all types which use OCLC. There are also a couple of online circulation control systems which had short records in them. What we did there is

that we took all of the OCLC records from all 70 libraries and put them together on one COM catalog and then we converted the short records to the longer full MARC and put them on there too. But, now what about all the other small libraries in Wisconsin that had resources that they wished to be added? And interestingly enough, what we found when we started with the largest libraries in Wisconsin and we started looking for unique ones, was although there were scattered unique titles, after about the first ten libraries, we did get, by far, diminishing returns. Not that there weren't unique titles, but the cost of finding some of them would have been prohibitive, in their particular situation, which is not to say that is Maine's situation. But, we needed a way to help smaller libraries, smaller public libraries and small academic libraries, school libraries, get their holdings on the statewide database.

What is being used in Wisconsin is a microcomputer program called MITINET which is being used for conversion. It is being used on Apples, primarily because at the time this program was being introduced there were 2,000 Apples in the Wisconsin public schools and now there are considerably more, many of them located in libraries. Basically what occurs is a vendor has prepared a microfiche of all titles on the Library of Congress MARC database and the Wisconsin state database and arranged them in title order and has added to each one a unique number that has a check digit. And the procedure which is used is to check your shelflist against the microfiche, put onto it the unique number and enter on your microcomputer the unique number and your own call number and your own branch holdings. That is then later added to the state holding. In Wisconsin, however, lest you get all excited that I am trying to replicate Wisconsin's set-up here, several of the very large libraries are already committed to existing automated internal systems. There was never any intention of trying to do anything more on resource sharing than a statewide COM. The concept of doing anything that would link more than one institution into public access catalogs or into circulation systems was never considered. The cooperation level was never that high.

Probably, if you're going to use this system for anything, you've got to get at least unique local call numbers in. But there's a real interesting problem in doing retrospective conversions for a group such as this, and that is you have to agree on standards. It's very difficult. One of the letters I've already received talked about how good it was to be able to do your own local work. If you want statewide automation, doing your own local thing will go because if we do something such as matching against the LC MARC cataloging, it's going to be impossible for the number of Maine libraries involved for us to keep individual variations of that LC MARC cataloging.

At the University of California they do keep the cataloging variations for nine libraries, but that's one of the things that

is adding to the cost of MELVYL. Those are nine institutions, not the number we have here. It's a question of: is it the first record in that's considered the best record, or do we set up some sort of hierarchy of who's record always goes in first? There's a great deal of local autonomy that has to be given up in cataloging practices if indeed you wish to share bibliographic records. What I will tell you that if we owned in the state of Maine in 200 different libraries the same title, you will never be able to afford to store it 200 times 3200 characters in any online system we have. And that, frankly, is one of the things you're going to have to wrestle with. Now, that isn't saying that we're going to completely junk all local information. Local call numbers are still very viable. There will be a number of places where we will be able to allow some local variation. I also suspect, frankly, that many of you are really using the same sources now. That you are using CIP information from the book, that you are using Library of Congress printed cards, you're using cards that come from a book jobber. Those all are from the same source. OCLC, for getting your cards from the state's card service. They're all coming in the same. They're all looking pretty much the same. It is not necessarily a problem, unless you make it a problem. But it is there.

I mentioned that in working with patron files that you have to collect everything you're ever going to need. If it's not there we can't display it, we can't bring it up. And then we have copy level information. Copy level information is also a very difficult problem and is really dependent upon the kinds of information that you already have. How we're going to do it. But the copy level information is what allows us to put individual identification on each book. The bibliographic information is the information which is common to all copies of the title. The item information is those things that differ from copy to copy. That could even be the difference in call number from a reference copy to a circulating copy to a copy that is in the juvenile collection or in a special collection.

I think that is important that anybody who does embark on any type of retrospective conversion remember to keep the product current. Read your tapes. Make sure your discards are taken care of as religiously as new books are put in. Again, you only want to do retrospective conversion once. Never again.

Break

Online searching. I think that there's an attitude from the public service side that any library worth its salt is doing online searching, but I think the first thing that's most important for you to be looking at is what is your objective in doing online searching. It has to be for reasons other than the fact that everybody else is doing it. Well, I suggest that the

goal of what you are doing is to provide answers to questions as effectively and efficiently as possible. It's important to remember what is, after all, my definition, because there is a surprising feeling when I talk to librarians about the use of online searching, particularly ready reference online searching, that somehow, providing an answer using an online database negates our mission to teach and instead provides an easy answer. Now, I'm not too sure where this whole thing about our mission to teach came from anyway, in that my library school curricula was not all that different from that of most other library schools and I was never taught how to teach. We may have been taught that was part of our mission, but we weren't taught how to do it.

I have read a couple of very actually what I consider appalling policy statements on the use of online reference that state that online reference services would be used when all manual sources have been exhausted. Well, the thought of sending a student or a patron of any type off on a two hour search through sources that we know may be inefficient for that search when we can find the answer in a four to six minute search costing under \$10.00 is to me appalling. We are teaching in order that people who are doing repetitive things will not have to ask us for help every time. But many of the things that we are able to find on online databases are not the sort of thing that people are doing repetitively. And what we really are supposed to be doing is providing answers.

Who uses online reference services? Well, we have some preconceived notions that there are some students, there are some professionals, there are some business people. Perhaps not as much of high tech business as we think, but it's important for each library which may wish to go into online searching to create a profile of its own users. Who are you trying to serve? Because that will very strongly influence the databases you use and the type of policies you devise in order to use online searching.

There are basically two types of online searching being used today. One called ready reference searching, the other called fee-based. Now for purposes of clarification, and so that I've got some semantic consistency, I'm going to use the term "fee-based" to refer to a type of reference searching, even though sometimes it's free, because the difference between them is basically that ready reference is quick and dirty searching. Fee-based is the more expensive searching that most of you are probably familiar with when you think of reference searching. There is, however, a very strong growing move to ready reference searching in this country. Ready reference searching is usually done at the reference desk with the patron in front of you, immediately upon the presentation of the question. The major difference, what's going to distinguish whether a question is a quick and dirty ready reference or whether it is a fee-based question pretty much is one of the things that comes up in

library after library, is that in a ready reference search, with use of an online database, is at the librarian's discretion. It is the librarian who decides that it is more efficient and more effective to use the online source than the current sources in that library. This is not for the student who wants an exhaustive bibliography before beginning a Master's thesis.

Usually, the patron is watching, so that the search can be modified, during the search itself. Usually under ten minutes and under \$10.00. Usually ready reference searching has no charge back to the user. It is a limited search, it is in no way designed to be complete. It is a supplemental, limited aid. It is suggested by the question and by the limitations of the particular collection you're working with. It usually results in fewer citations than in fee-based services and it may sometimes result in a referral to fee-based services searching.

Fee-based is usually at the patron's request. It is performed usually after an interview which helps design the search strategy. The search strategy is usually more complex. It will involve more databases and it usually will involve, well, when I say more complex, you may end up with more Boolean search strings. Ready reference usually is a very few terms, very easily entered. It is a planned search, not spontaneous as with ready reference searches. It can last from 20 minutes to 2 hours for all phases of the search from the initial interview through the search itself. It tends to be definitive, all information or as much information as you can obtain on a topic, although they are finding except for some rare academic situations that we in our desire for completeness, are usually giving the patron more citations than they need or want.

The patron usually pays some part of the direct cost. Rarely do they pay the full cost, including your own staff costs and all the overhead charges. The direct cost tends to have to do with the fees charged from the database provider directly back to the library. Often it's by appointment. To my way of thinking, whether or not you use fees is an individual policy matter. There are some of the most complex schemes I've ever seen for devising fee structures. The first ten dollars is free, the second ten dollars paid by the person requesting the search. The third ten is shared equally, the fourth ten...on and on and on. What I find interesting is that in very rare cases, most of what you've probably heard are actually horror stories where the cost of a given search may run up into a thousand dollars or so because somebody may the error of hitting 2500 citations and saying yes when they were asked if they wanted to print the citation. But, most searches are much less expensive than some of our fee structures would lead us to believe. In either case, remember that searching is simply a tool, and even in a high volume searching location, it is still a very underutilized utility. I don't think people have begun to exploit the power of the databases out there.

Why do you use the online searching? Well, first of all, of course, to expand your services, particularly in those libraries which never owned the indexes where the online tool replaces the printed indexes or compliments the printed index. It dramatically reduces subject barriers. The way our system is set up now, is if you're going into a certain index, you only get material on that subject. In certain fields, such as managerial psychology, the range of databases that really need to be searched is quite broad and could produce quite a problem searching manual indexes. Obviously multiple concept searching is much easier when you are able to use a Boolean search. When you are able to take two terms and combine them together in the search and go after the concept. It's very, very difficult in most paper indexes, if not impossible. There's a tremendous expansion of the search tools. However, the corollary to that is that it puts a tremendous burden on us to really know the literature, to know the terms used in the field.

Right now we have a lot of people who are using Medline to do searches, who never before would have ever considered subscribing to Index Medicus which is really its source although Medline is much more powerful than Index Medicus. But many, many public libraries are tapping into Medline who never used Index Medicus. The subject knowledge required of reference librarians in doing the search is much more complicated. You could overcome the time lag in indexing by using an online source.

In Newsearch, right now, you can get the overnight edition of the New York Times, Christian Science Monitor, Washington Post and Wall Street Journal, online by the end of the business day in which they were published. You have the ability to search on new or inadequately indexed terms before they are adopted in the structured subject strategy, so that you can use terms which are popular today and find materials by searching for key words as opposed to a controlled vocabulary, which is what appears in the printed literature. I had a really frightening experience myself and put myself into a position of a patron when I was trying to use library literature to find an article I had written and I couldn't find it. The paper index was so inadequately indexed on the subject that I had discussed, with the terminology so out-of-date, that I only found it under my name and what I really had been looking for was other papers on the same topic. Since I could never find the subject my paper was indexed under, and I did have a fairly good idea of what I thought I'd written about, I never could find another paper on the same subject. Now, if I had found a term with only my paper under it, I may have gone away satisfied that nobody else had written anything, but I didn't. I went away very angry with a very nasty letter going off to Wilson. The least they could do if they were going to stay behind in terminology, at least keep up with library terminology. The term I was looking for was "retrospective conversion."

We use journal literature in many fields because of its timeliness and yet we then turn around and use indexes which index materials under terms that are not timely and where the paper index does not come out in a timely fashion. The reason the professional in the field has used the journal in the first place has been negated by the tools we are using to search it. Now, one of the interesting things that you can use in finding material in an online search, is to take a term, a phrase that you know and find a place where it is used and go down to what is the electronic equivalent of the tracing and find the subject terms under which that particular paper is indexed and then use that subject to search. Now, very interestingly enough to me, is working with the early version of the public access catalog at California State University at Chico. They have no authority control.

(End tape three)

But patrons soon discovered that they could search a term, hoping to find a title which began with the term. They then went down to the tracing, found the subject heading, and then did a search on the subject heading. Some libraries are doing a standard search on a very popular topic and keeping a copy of the search results at the reference desk. There are some interesting questions on copyright in that case, but in most cases, we think it does fall under fair use. The times when it appears not to is when people are xeroxing it wholesale and handing it out to classes. One of the things we are really doing, and I think we need to think about very closely, is substituting access for ownership. We need to know that what we're doing is we're acquiring the material after we know it is needed, not before. We do some guessing now, particularly in middle sized libraries and larger, on what people are going to ask for and we very rarely figure out what the cost per use of that tool is. We work right now to make sure that a search, for instance, comes in under five dollars, but Grove's Dictionary of Music and Musicians is two thousand dollars. How many libraries that own it are actually going to count to make sure that they have used it, so that it costs, per search, no more than that \$5.00, which is their limit on online searches. Chemical Abstracts now costs \$2,500 a year.

(Audience) \$8,500 a year.

Susan Epstein:

And you have now switched to using it online. Thank you, because the last I heard it was \$2,500. It may have been at the library I checked at, but thank you. It makes my case even better. The patron demands for services is increasing as they see fee-based brokers around, advertising and providing services to business. We also see an increased number of advertisements for end user searching appearing in things such as computer magazines, where people are encouraged to use BRS After Dark and DIALOG's Knowledge Index. They are current, fast and accurate. A very good way to get information.

Now, the problem is you have to use it often if you want to become very familiar with using it. The more you use online searching, the better you will become and the cheaper each search will be. Be very careful about charging patrons if your staff is in a learning curve. It is not fair to charge your patrons because your staff is inefficient. On the other hand, watch out for giving all the searches to the best searcher you've got, because that person will just get better and better and the rest of them will get worse and worse, particularly for ready reference searching.

There's an interesting thing that's coming in some libraries,

we're getting a better professional image because we're using this high technology tool. In companies where end users are trained to do their own searching, their respect for intermediaries (i.e., librarians) has gone up as they begin to treat information specialists as co-professionals. They finally realized how difficult some of the things we are doing really are. It obviously increases the quality of reference services. Another thing that's important is that we're getting more and more non-bibliographic data bases, more numeric databases, more information databases. Where the actual answer to the question, not citations to the answer, can appear on the database itself. In some cases, the information contained in the abstract of the article has enough information for the person who's requested the search, enough information they may even have the answer to their question.

Again, this whole thing if we offer such services as BRS After Dark and Knowledge Index to the general public, what about the library as the corner grocery store? Who's going to do searches for other people who have needs who don't have their own home computer and a way to access them?

BRS After Dark and Knowledge Index are services designed by those two reference information utilities which have combined very popular databases. In the case of BRS they also have a Colleague series which are databases that pertain to one field, where they are going after the end user, not the librarian as intermediary, the end user. And they are primarily basing the rates so that it is much cheaper to search at night and on weekends, but that's a time when a lot of libraries are open. The search terms are much simpler, some of the power is dissipated, but the learning is much easier. It is an easy way for libraries who are not sure how much searching they want to do to get into the use of online database searching, because the training costs are very, very low. The commitment you are making is very small. Particularly if you already own a microcomputer or some other type of terminal with telecommunications capability. If you can do that, you can get into searching something like BRS After Dark or Knowledge Index for as little a commitment as a hundred dollars.

However, we have some problems in this great paradise I'm painting. We have some patron resistance to fees as you might imagine and that's going to affect the usage level. There are lots and lots of studies of early online searching services that started out free that as they started to increase the fees, the usage dropped out. The searching may increase your interlibrary loan workload. On the other hand, in many cases, what people are finding is that the work load is not increasing because the search has enabled people to find exactly what they want. Instead of doing the scattergun approach where they pick every book in Books in Print on the subject or everything in the index, they instead are picking two or three more crucial things to go searching for.

Another hidden problem, it's true here and in lots of other areas of library automation, increased patron expectations. Can we keep up with the technology? We are on the technology express. The patrons will expect us to offer more and more services and to be better and better at what we do and we may not be able to keep up. That may have more public relations negatives than offering the service does in the first place. That's very true of almost all technologies we get involved in. It's opening a Pandora's box and a lot of librarians are finding that this is causing some problems. If you find citations, what's going to happen with document delivery? It's expensive, it's slow. There are a number of studies that show that although the time necessary to locate material for interlibrary loan or for document delivery has increased dramatically, the overall time in the last 30 years between the time a document was requested and the time the document was received has not decreased at all. Now, what I understand is that we've got a fantastic postal service within the state of Maine.

(Audience)

Depends on where you are.

Epstein:

What I'm hearing are great things out of Bangor Public, with a turnaround that you frankly couldn't expect in most metropolitan areas. It would literally take me three days to get a letter across town if it has to go through two large central post offices, each one of which takes a day. However, the three week delivery which used to be common thirty years ago is still the average delivery despite all the things we are doing with interlibrary loans. Union lists of serials, OCLC online interlibrary loan, all of that aside. Time's important to most of the people who are using these services. The offline prints and ILL maybe as dated as last week's newspaper. That may not be the service they want. This whole situation, where you can provide the exact information needed at the time you need it, is proving to be extraordinarily threatening to some librarians who previously could search the collection that they had in their own library to its limit and then call it quits and send the patron on their way with nothing. Or with a referral to some other library. Online reference searching now obliges people to keep going. One reference librarian has been quoted as saying that it's definitely changed her whole outlook on her job because before she really considered herself the lord of the reference desk. She knew all the materials in her library and what was in them and therefore she was the expert. As soon as she started to go to outside databases that distinction began to disappear and in many cases she now felt inferior to her patrons because they knew the subject and she didn't. And if it wasn't in her library, she

knew less than they did about the possible sources for the information. I, however, don't think that reason enough not to do it, I just think it's something to be aware of.

We can sometimes provide too much information. It's almost as bad as too little. How much do we need to provide patrons? How much do we need to do to satisfy our professional need for completeness? When I was an entry level librarian doing reference, I was very unfamiliar with the collection I was working with and I was very shaky on my own self-confidence as to my skills. Particularly when I was working with high school students, because I felt that I could get away with it, when they would ask a question, I would direct them to some source. I would always say, "Now before you leave the building, come see me again" because I always thought of something else after they left the desk and I was always afraid they'd get out of the building before I could tell them about this marvelous source. Well, what I discovered was that time after time they really only wanted my first source, very rarely, particularly high school students, did anyone want my exhaustive knowledge of everything possible on the topic, but I felt compelled, particularly at that stage in my career to give it to them.

The patrons, interestingly enough, in libraries where they're offering both quick-and-dirty reference services and fee for service searching are very often satisfied with the quick and dirty. It is amazing, with what is all of our desire for completeness, how little the patrons really want. One library set a limit of fifteen free citations that they would be giving to any searcher and after fifteen citations, they would start to charge. What they discovered was that most of their patrons really wanted five or less. The patrons aren't at all interested in the mechanics of what we are doing, particularly after they see the search once. They want the information. Then of course, we have the ethical issues which are probably more complex now than they were for the printed sources on most legal and medical issues. When we can get in and search Medline and we can search Lexis and Westlaw, we have an obligation, if we are going to search those databases to know a lot more about the terminology than if you direct somebody in how to use the index to case law from your state.

What are the trends that I see happening? Well, first of all, I see that we are going to be more responsible for teaching how knowledge is organized and how concepts work, how to narrow them, to make them more broad, because what we're going to end up doing is that a number of searches in the future are going to be done by the end user and they're going to come to us for the hard ones. And we're going to see many more direct answer searches, not providing citations, but providing answers. More, much more, ready reference searching. We are going to see more downloading. That is the taking of hunks of data and putting them into our own database. We will see it being done either so that it can be

printed out on a one time basis, on that particular search offline, or we will see arrangements such as the one Chemical Abstracts has where you will be able to down load a certain number of citations annually for a certain fee so that you may manipulate and search that database any way you want later. And we're going to see a number of implications and changes in the way fees are charged as downloading increases.

We're going to see a lot more direct users, home users. We're going to have an even greater fight over copyright and ownership. The downloading issue is nowhere near close to being solved. There will be a greater use of microcomputer terminals, not specialized terminals, dedicated to use for reference searching. We're going to see some more specialized databases and more specialized vendors. Some of the databases that are provided for specialized industry segments now at the cost of hundreds and hundreds of dollars an hour are absolutely mind-boggling and we're going to see more of them. This again will mean more intermediary searching by us, for more complex searches and for searches to the databases that may be rarely used by an individual which they do not wish to subscribe to or learn how to use for that purpose, but they will use it if they have to use it often. They may have their own subscription password. We're going to see many more cases where we have no print equivalent of the database we are searching. That has some interesting implications of what happens if that database is not financially viable and the database folds. Right now when that happens, we have the back issues. We won't have the back issues if no one's willing to pay the storage costs on the vendor system. Last year we had 240 online services, 800 database producers and 1,600 databases. It's predicted to double in the next 18 months or so. The number of vendors, however, will not double. (Vendors are the actual people where you dial into the service.) I think we'll see more and more consolidation of that.

We're going to see some accessing of other library databases, both similar systems to the one you have, and disparate systems and from a library which has no automated database into databases, which you may be able to search for a fee, just as you are now able to search a commercial database. We're going to see more and better software. The good old term "user friendly" again. More transparency where you're not as aware of exactly what is happening, it's just going to happen for you. We're going to see more document delivery, more ways where on the terminal, you can either request the document be mailed for you, or in some cases, you're going to be able to have the document or selected parts of the document printed out directly onto your terminal, either now or tonight. We're going to have more menu driven systems and standardized language. You won't have to learn a language for every system. We're going to see a lot of intermediate searching, where you dial into the library and from there, it's the library that has the password and it's the library that you go through on your way to the database. We're

going to see the mounting in-house, in your library of a selection of databases to use in-house or from home. Now, that one of course is fraught with questions of copyright and payment and whatever. We're going to see greater gateway access. The whole concept of searching databases is going to open us to sources we have never, ever been able to tap before. This happens to be one of my favorite subjects as you might have found out, but I'm not going to talk anymore about that in hopes of talking a little bit about networking and then I'm going to let some of you who can still stay ask a few questions.

What's a network? Almost anything. Any two people, any two groups, anything acting together. We have regional networks, we have national networks. OCLC is a national network. So is Fedlink, the organization of federal libraries. NELINET is a regional network which uses a national network. We have consortia which are really networks and we have networks that are really consortia. Your Maine districts are really a consortia. The two different types that we have. One type, and I think districts are quite close to that right now and OCLC is a network of the same type, is basically where all information comes to the center. And the center provides information and sends that back. But we also have a number of networks, consortia which are star networks or circle networks where the information flows from many different parts of the network to other parts of the network. Where there really isn't a center. We're seeing increasing growth in the number of multitype library consortia. I think we see that here in Maine very early, incidentally. The idea behind a network or consortium of any kind is always that it's mutually beneficial. If it does not prove to be mutually beneficial, the various parties will fall away from the consortium and it doesn't matter, as far as mutually beneficial, whether we're discussing monetarily beneficial or service or some other level of satisfaction. But much as in working with contracts, if you can't work a win-win situation where each party is gaining something, the consortium is guaranteed to fall apart.

What are some of the advantages to a network? Well, first of all the sharing of resources. Sharing expenses, expanding services, reducing costs, the good warm feeling, I don't know, of being able to share things. To have colleagues. Some of the disadvantages, as we have some networks across the country which are very top-heavy or very lop-sided where the benefit that is accruing to some of the members is well out of proportion to the benefit accruing to the others. We have the costs which in some cases are very, very high for the need that they are filling and sometimes what we have had happen is the costs are being ignored or at least sort of hidden away because we're so convinced that the need is strong.

I might as well tell you one of my biases right now. That has to do with not being aware of how much interlibrary loan costs versus other alternatives. I did a study for another state where

I discovered that in that state, 1% of the circulation was being done for interlibrary loan. And that we had two cases where libraries were using significantly more resources than that. More than 1% of their circulation was coming from interlibrary loans. And the two cases were libraries where their per capita support was over 35% higher than the per capita support for other libraries their size, which meant that they had a lot of staff and also a highly demanding public and they were using interlibrary loan because it was there, although they had the money to buy books. The other group was coming from the libraries where their per capita support was greater than 35% lower than the average for other libraries their size. Where perhaps the state funding going to interlibrary loan services was inappropriately being diverted for those libraries. My comment in that case had to do with the fact that even if we did a massive campaign to increase interlibrary loan across the state, if we got really lucky we might increase it to 2% of the circulation. The question was at what point are you paying too much for that service? My job is not to tell you what that dollar figure is, but to raise the question.

Networking is designed to help reduce the costs of that process, but if we put too much money into the networking itself, then we are likely to find that we are wasting resources and that interlibrary loan is not as effective as it should be compared to what we could be spending the money on. Now, one of the nice things about looking at interlibrary loan in Maine in the context of possible statewide automation, is that one of the things that we'll be able to do if we do some larger scale automation, is to piggyback interlibrary loan on other applications. What we know is that in library automation the greatest costs always go into the first application automated. And what we traditionally have is that for an academic library, this is either cataloging such as OCLC or public access catalogs because that's where a great deal of money is being placed. In a public library, it is often into circulation control. Once you have those systems operational, the interlibrary loan and the sharing that comes with it and the addition of other libraries comes in at a cost which does make it feasible to include those as a resource sharing. And brings resource sharing down inside the realm of feasible costs. Telecommunications has a tremendous impact today on the way networks and consortia are working.

I think that you're probably all aware that one of the strongest advocates that libraries have had at the hearing between the Federal Communications Commission on the amelioration of the rate increases for libraries, the strongest advocate the library community has had, the one who's done the best job of testifying, has been OCLC and that's because they're facing telecommunications increases of over 60%. We are going to have to be looking at telecommunications in Maine, clearly. Fortunately, our statewide automation committee has a telecommunications expert on it and we've already talked some about possible microwave links.

We don't know how much we're dreaming. I did warn you earlier this morning and I think it is quite true that we have to be very careful because I don't think we'll have any solutions to the telecommunications situation for at least three or four years. Because even if, for instance, we did have millions of dollars that just dropped out of the sky that had to be spent on microwave tower construction, it would still take us that long.

Now, what we've seen in the past is a lot of linking at the top. We've seen linking or attempts at linking between the bibliographic utilities. The Linked System Project is probably the most significant operation going on in library networking today, in that it is trying to link the Library of Congress, Washington Library Network, and RLIN together and they're exchanging authority records now. OCLC has agreed to play, but they're playing a little bit on the sidelines. They are not an enthusiastic player at this point. The funding originally went to the first three participants. It is using an international standard called the Open Systems Interface which will allow us to exchange information from disparate computers with disparate applications.

There was another project that is still barely alive called the IRVING project that went on in the state of Colorado when they were trying to link five different disparate automated circulation systems. To be quite honest, I had some philosophical problems with the whole project from day one. I think they tried to go too far in that what they basically wanted to do was for you to walk into the Denver Public Library with their Data Phase system to renew a book that you had taken out of the Jefferson County Library with its home grown Sperry system with your Aurora Public Library CLSI card and have the computer say, "Sure, fine, no problem." The other real problem with that whole technique is that it assumes that every system was not going to change over the years and, of course, that's false. We have various computer manufacturers, turnkey vendors, developing some very exciting links. CLSI has developed and demonstrated a link called Datalink which will link CLSI installations and will allow you to access BRS and DIALOG. CLSI will very shortly be in a test with another manufacturer, which I can't name, where they will be linking to disparate systems. Data Phase has announced the use of UNINET, a very large data network in the country to link different Data Phase users which is significant because Data Phase does use two different brands of computer in their systems with two completely different systems and they have demonstrated the link between those libraries and they also will be entering into an experiment soon to link to a disparate library.

We're going to see many more of these linkages. At lunch today, I talked about some of the linkages that are occurring. We have some exciting things going on in Illinois where we have large turnkey systems that communicate to each other in a very pragmatic way. They are not electronic connections, they are

more dial up connections, one to another. We are going to be seeing more people sharing systems, much as they're doing in the state of Nevada and then those systems communicate one to another. We're going to see a combination link of private and for-profit groups, linked together for different purposes. As we work on this the whole problem that has come up in virtually every network, is this whole question of standards, who decides, priority, governance. Networking is always more difficult at the political level than is going it alone. It is also usually cheaper and a lot of these specialized services are easier at the network level than they are individually. But it does cause some problems. I think the ultimate of that is to see how many times OCLC has shot themselves in the foot lately.

The interesting thing that I think we will see is that I think we're going to see more and more public driving of the linking. That what we're just now seeing is the public is becoming aware of the links that they themselves can use in their daily and business lives and wondering why we aren't using those linkages. It's going to be very hard to explain to somebody who lives near the border of Maine why we can't communicate with New Hampshire or Massachusetts. It's going to be hard to explain why they can pick up their home microcomputer and can dial into DIALOG, but we don't have the facilities and after all DIALOG was originally designed for libraries. I think we're going to see more and more of that kind of thing. I think we're going to see a lot of technological changes with what we're seeing today as really the first step.

I think that what I am going to do is not talk about the future of the library, because I want to leave some time for questions. Suffice it to say that my feeling on the future of libraries and the library of the future is that we must keep up with these things that the public is dealing with, because if we don't, we're going to lose our constituency. And we're going to become the thing that we are in many communities right now, which is a nice place for recreational reading. Now, I have absolutely nothing against recreational reading, I carry a heavy suitcase around all the time, but the problem is that when you're fighting for budget resources against fire and police, recreational reading is not going to do it. Information provision is. We need to be much more careful about combining those services and really get into serving the community in a way in which we become indispensable so that we will be able to get just a little bit bigger chunk of the budget sector. If we get just a little bit bigger chunk, I think it will be amazing what we can do.

Questions! On almost anything.

Question:

I hope to get involved in _____ but I hope you look into

connections for cable TV. I realize that we don't have the same cable TV network all over the state, but talk about the high costs of telecommunications and... [faint].

Epstein:

The question has to do with the looking into the linking of cable networks, particularly in the Portland area.

It certainly will be looked into but I think we have two real problems. One is that in order to use this the way we need to use it, we probably have to have institutional loops which are available in some cities and not in others. But, more importantly, is two way transmission and across the country, and I had not looked into Maine at this point, across the country, less than 10% of the currently installed cable networks have two-way transmission. We need to have that if we're going to do any kind of linking of libraries. It will enable us to get into the homes if we only have one way transmission, but if you wanted to go from library A to library B, we've got to have two-way transmission. Otherwise we end up with everything up at Presque Isle and no way to get it back down to Portland.

Actually, I will give one piece of information in case any of you do have cable franchises which are coming up for renewal, or for renegotiation. Work very hard to get both institutional loops and two way transmission. It is definitely the wave of the future, very definitely cable companies would rather not put it in, there are a lot more expensive to put in and they're hoping if they can slide through without doing this, they'll be O.K., but you have a very strong vested interest in getting those things working.

Question:

How many states actually have statewide networks of more than one kind of library?

Epstein:

I guess the real question is what types of networks are we talking about. We range from West Virginia, which is in the early stages, admittedly, of a full statewide network. There will be one automation vendor who will provide all automation services to the state of West Virginia. Two, Nevada which has the whole state wired and they all happen to be on one vendor, but the state doesn't control that. They do control it through some funding, but they never set it up. In West Virginia, the West Virginia Library Commission set up the consortium. In Nevada, the consortium was set up by the individual libraries.

We have some things going on in Vermont and New Hampshire. Two, some things which are going on to provide some statewide information, such as statewide COM catalogs, we have a number of those. We have some statewide subsidy of OCLC use to encourage the use of OCLC as an online catalog. There really is quite a variety of activities going on in states. We also have the state of Hawaii where all school and public libraries are under one joint jurisdiction. The Hawaii State Library is the library on the island of Hawaii and they, of course, have bought one system. Now, they are not linked at this moment to the University of Hawaii, neither Hilo nor Manoa nor any of the private colleges on the island, but I think they will be later. But, that's a case of you want to work with public libraries and in the state of Hawaii you've only got one client.

So I think we have a variety of ways that we're looking at it and I think that you may have some of the things that have been factors in those states where we are looking at one system. One of the givens is that you have some real centers on which to build. There is not a great deal of automation existent in the state of Maine, which means that we don't have to work with the same number of givens that we might in other states. I'm reminded when I did some work for the state of California two years ago, and semi-facetiously, said that the title of the report was actually wrong and what it should have been called was The Future of the California State Database: Too Late. It was fifteen years late in its planning in that everything that was feasible to be automated or had been automated in some plan the State Library had, would never be able to overcome the vested interest of the individual libraries. I don't think we have that as much here. I'm still hearing a strong desire for some cooperative effort. The other thing that really governs has to do with the history of cooperation in the first place and I think that the fact that you've already been doing a great deal of cooperation without using automation, bodes very well for the possibilities of cooperation in the future using automation. It's really just putting a technological layer on and in situations like this, frankly, I would think that the technological layer would be the easiest one. One and two are always political or financial and those vary. But, there are lots of different varieties.

Question:

In your opinion, what should be the position of a medium sized public library within twelve miles of a large library in this state as far _____.

Epstein:

I guess, in my opinion at this point, until we see what we're

going to settle down into, that some things that were said at yesterday's meeting, wait until some reports come out and see what kind of funding level we can get. At yesterday's Automation Committee there was a very clearly expressed desire to include the resources of medium sized libraries in anything we do. Whether or not that actually results in their using the online system for more than resource sharing I think may be up to the individual libraries, as we look at some of the possible funding mechanisms. Because, what I think we do have here is a local benefit to some libraries that will come from the exchange of manual circulation systems for automated systems, etc., for online catalogs which is a local exchange of money. We also have a statewide benefit which comes from some of the resource sharing and I think we're going to end up with some combination of funding sources and I, off the top of my head, would hesitate to say that a library which would use a statewide automated system for all possible functions would not be expected to pay something for their services, because it does have direct benefit for that library. On the other hand, a library which we ask, using, to pick this right out as an example because she was at the committee meeting yesterday, Maine Maritime Academy might not choose to use the system to do circulation or to do an online catalog and might only use it basically at the request of the libraries of Maine because they have some very specialized resources which we wanted to have put on the database. As I said this is very early in my study and I don't want to be quoted as my firm position, but it's an indication of my direction of thinking. In that type of situation, I would see some generalized funding helping them put those resources on the database. On the other hand, if they decided that they wanted to also use circulation and replace their catalog with an online catalog, and use serials control, they might be asked to pay a part of that. So that I think that the thing I would say now is probably not to make any big moves at this point until we know a little bit more where we're going, what kind of reception we get from legislature. I do think, though, that some of the resources we've got sitting in a medium sized library are probably too good to ignore. That came through very clearly yesterday.

Question:

What are the obvious obstacles, if any, in having a for-profit, corporate library involved in a statewide network? Is that something that could easily fit in?

Epstein:

I think partially it depends on where the funding comes from. Gary is probably much better able to answer this than I. There are a number of instances, state of California is one, where there is a statewide database on COM which has materials from

both private and public sector libraries and they've been very careful in the way they've split up the way the funding goes for that. And we're doing as much as we can in calling it public library related, serving the public library and that enabled us to use state funds. But it can also, if we do end up with some legislature money, that will also make a difference in how the legislation is written. I think that the rationale that has been used across the country ...

(Turned tape over)

.... in this kind of case, there would probably have to be some written agreements on the resource sharing. Which is probably nothing more than what you're already willing to do. But there have been ways of dealing with it in other states and I think it would depend upon the political climate to a large extent.

Question:

Concerning authority control for subjects, I'm wondering what factors you take into consideration as we (unintelligible) as we

Epstein:

The real question involves authority control in subject headings. I want to take them one at a time. The first one has to do with basically how you deal with see references, do you make them separate, do you link them to the bibliographic record. That is primarily a function of whatever system you choose to use. I certainly think that in the long run we need to have a system of see references derived from the Library of Congress red book in magnetic tape form. There are a couple problems with that. The first one is that the Library of Congress does not have their act together yet on the magnetic tapes. They're very good on name authorities, but subject authorities tapes were designed to be used once and they do not modify well, to put it mildly. It looks like it's going to be another year or two before we get those into any kind of shape. It will probably be a year or two before we get anything going here in Maine either.

The other problem is that most commercial vendors who are dealing with authority control are still in the very early stages of that. And authority control is one of the things that we are asking for, that we are planning for and yet is not quite a reality. At this moment it is probably in poorer shape in an automated setting than it is in 10% of the manual libraries. The problem is that most manual libraries are not doing good authority control work either so that we have problems there,

too. The question about what about Sears headings and LC headings on the same record. I don't think we have any real problem philosophically with this. We have some very strong technical problems. The first one is that there are virtually no library files existent in machine-readable form today from libraries which use Sears headings. So, the first problem is finding records we can match against and pull into our database. So, we're going to end up with some situations where we're going to have to key in an entire record which may be more trouble than it's worth. The question of putting both Sears and LC headings on the same file runs into a technical problem, which is if you use automated authority control and you use the LC MARC tapes such as they are, and some of the vendors have done some really marvelous things to get them as operational as possible. Some of the Sears headings are illegal LC headings and so what you will have is automatic swapping so that, to give an example, if you use the subject heading Arithmetic, which is an automatic see reference in LC to Mathematics and I believe is a legal Sears heading. If you take the record off of OCLC and it has the heading Mathematics, and then a library which uses Sears comes along and adds the heading Arithmetic, you're still O.K., until you apply automated authority control which just takes the tape and goes through looking for illegal headings and you suddenly have two headings for Mathematics and a see reference saying Arithmetic, see Mathematics. You can get rid of the duplicate heading, but that's not the real problem. You've lost your Sears heading because it's an illegal LC heading. There are some real problems with that in the same record. The addition of extra headings can be done. The problem, again, goes back to this trying to use automated authority control. If you make up a lot of local headings, headings which are not part of the Library of Congress's subject authority structure, not necessarily whether they were put on the record originally, but not part of the structure, it means that they won't be controlled by the automated authority control and you'll have to always handle those manually. The more of those you have, now we end up with the job of who, statewide, is going to control that. So, some interesting problems.

In most states where we have done any kind of smashing together of bibliographic records of any type, we have ended up with a bibliographic standards committee, which has moved on these issues. They are serious and it's one of the issues where we have to use a lot of patience and a lot of give and take. A lot of compromise. I think the important thing to realize is what we are trying to do is to increase access and if we can increase access, perhaps some of the local processes we've used can be abandoned along the way. Because they haven't done quite the access that we hoped they would.

[faint question]

Epstein:

I think you just hit the real problem. She's talking about using call number access as a more specific search tool and it can be used, but it's another Pandora's box. If we talk about multitype libraries, then what we have is public libraries, school libraries, academic libraries. We not only have the problem of LC call numbers mixed with Dewey call numbers. (And you can do the same sort of searching on Dewey though they aren't quite as specific necessarily because with the Dewey call number you're allowed to cut it wherever you wish after the decimal point. We will have libraries who have different degrees of precision.)

The other real problem with allowing call number searching, particularly if you put a public access module on this, is what happens when somebody goes searching on the call number "Fiction," which is used heavily in public libraries or in school libraries, not the PZ which is used in the academic libraries, but the word fiction and suddenly what you hit is 173,000 satisfiers. Now, if we are only talking about allowing this access to staff, it is controllable, although we will still have some people who do that. The problem is that as soon as they find out that they have 173,000 satisfiers they will say, "Oh, no, I should have never done that" and back off and do some other type of search. The problem is, however, that the system still went through and gathered that list of 173,000 satisfiers. Meanwhile, all over the state of Maine, people are banging on their terminals saying, "What on earth is going on? Idiot!"

Call number access is a very valuable tool, but is another one that must be approached very, very carefully. It has some really hidden booby traps in it.

Question:

Earlier, you talked about the Nevada system and said that _____ similar in some respects to Maine. Can you talk a little bit more about the _____ and the goals _____.

Epstein:

Several people have heard me make a comment, and I think that you may, out of context, find it a little bit bizarre, which was that I find many similarities between Nevada and Maine. Certainly nothing to do with the climate, but what is similar is the fact that there are some very central libraries with very strong resources. There are a lot of remote libraries where there are a lot of people who have moved to this remote area quite deliberately, not because they were sent there, but because they chose to go there. Just as some of your residents like living

out in the woods, there are a lot of people that like living out in the desert and who still want heavy resources. I was talking this morning to Susan _____ from Bangor about the problem I've also discovered in Colorado which I know you have, where we have a lot of people who move to a state quite deliberately to get away from civilization and then walk into your library complaining about the lack of the daily New York Times. In Colorado, they don't understand why it takes three days to get there. The business and financial journals are nowhere near as complete as they are in their corporate libraries in New York City and furthermore, the problem you may not have, is there are no bagels in the delicatessen. Yes, they were running away from civilization, but only those parts of civilization they were running away from deliberately.

In Nevada, automation began ten years ago, which is very important to remember when I start talking about vendors that are involved. At that time, the Clark County Library District, which serves the city of Las Vegas, was an early user of the CLSI automated system. (Remember, in 1974, the only choice of vendors was CLSI.) When they decided to buy their system, they started talking with the University of Nevada at Las Vegas and they decided to share this system, but the system was purchased by the Clark County Library District and has been administered to this day by the Clark County Library District, with the University of Nevada paying Clark County for services. Since that time, the Clark County Community Colleges have joined the system, several independent library districts within a number of miles of Clark County have joined the system. Clark County's furthest branch is about 60 miles from their headquarters. And that is an independent system which is run as a service, owned completely by Clark County. LSCA has put a lot of money into that to help them buy terminals and to do various things to allow some of these people in, but it basically is Clark County's system and there is no extra governmental layer involved in this. The other libraries pay a fee for service.

Meanwhile, at the other end of the state, University of Nevada-Reno, decided that they were going to buy an automated system. This is actually about a year or two later. They, with the money in hand, decided to approach the Washoe County Library District which is the public libraries in Reno who decided to join in with the University of Nevada-Reno, on much the same basis as this was being done in the southern part of the state. Only in this case, the university owns the system. The Washoe County Library system

pays for services. Meanwhile, the Washoe Community Colleges joined in and so did several independent library districts. There are two other populations centers in the state, one is at Elko and one is at Carson City. They bought their automated systems much later, but decided for statewide compatibility, they would buy microcomputer based CLSI System 23. The other two systems are very large CLSI multi-processor systems.

Well, meanwhile, some of the libraries scattered throughout the state in smaller communities, decided that they were going to use this for access. So the first thing that happened was the state provided some money, both to the University of Nevada-Reno/Washoe and to Clark County to provide interlibrary loan services to a much greater area than they had ever provided before. In essence, each of them got half the state. And it was done in the beginning via telephone and written request. They have now moved to where they have put very simple terminals in each of these small libraries which now access the two major databases. The four circulation systems in the state connect to each other via telecommunications, so that if you are sitting at Clark County and you do not find what you want, as a staff member you are able to search, in turn, any of the other three systems. This is not a unified database. There are still four separate databases, but it is much easier to search. It makes great sense because the delivery between the two halves of the state is not good. There isn't anything in between so most of the courier between the two halves of the state goes by air. The interesting I think about Nevada, is that no government jurisdiction was ever created to handle this extra network as it has in many other states. And the ownership rests in one case with the public library, in one case with the University. It is probably one of the easiest statewide automation projects that ever was developed.

Now, one big difference. When I talked about having a dumb terminal, very simple terminal, in each of the libraries, they do not have as many public libraries as you do. There are a smaller number. When you get further out, it is easily 60 miles between towns, because there isn't anything in between. It is not like here, where you may have a small town four or five miles from another.

Question:

_____ population _____.

Epstein:

Yes, yes, they do. There just aren't as many so when you start talking about putting terminals in every library, the total cost doesn't get quite so high. But they do serve small population bases.

Question:

I wonder, could there be a way _____ with the OCLC instead of _____ a part of a network over a commercial vendor like _____.

Epstein:

First of all, let me get you another bias. OCLC is a commercial vendor. I don't care whether they're not for profit or not. They're out there competing just like everyone else and they make aggregate, more money every year than every other commercial vendor combined. No, there really isn't. This happens to be a bias because they've been hiding behind the not for profit, "We're the librarians friends, we wear the white hat" for an awfully long time and I don't think that's true, particularly their marketing of the LS/2000. No, I don't think there is any advantage in that respect with using the LS/2000. Every commercial vendor today has an online link to OCLC, so that if you are using OCLC as your bibliographic utility, in every case, you can bring your records over into the system directly, just as you could if you used the LS/2000.

Question:

I was thinking with the number of libraries ?that are members of OCLC? _____

Epstein:

No, it's a completely competitive, separate organization. When you, for instance, in New England, deal with OCLC for cataloging, ILL, or acquisitions services you deal through NELINET. When you deal with them for LS/2000 you deal with their LS/2000 sales force which is identical to the sales forces of every other commercial vendor. They make bids just as other commercial vendors do. Now, they might decide in a particular case to go after the business and you might get a better price, but it has nothing to do with the fact that you're all OCLC members.

Question:

Are there some states who've unified their vendors?

Epstein:

West Virginia. Yes, slowly, it's starting very slowly. We have some unified databases which are more finding lists than the only

databases. We have union catalogs, but as far as online databases, we don't have any existent at the moment. Primarily because of the storage costs. West Virginia is one of the few. The other state that I forgot to talk about was Wyoming. I was involved in that one and I keep forgetting that one. Six hundred thousand people in the state of Wyoming, one circulation system which will serve the entire state and which they will implement in tiers, probably four or five tiers with the first group involving University of Wyoming, State Library at Cheyenne, and one or two large public libraries and then they'll be joining other people. Other people will be joining them. At the moment, not all the groups are machine-readable.

Question:

What's the final _____

Epstein:

No, in Wyoming it will be one system using statewide telecommunication to get to one center. Frankly, with their population, it is feasible to do it as a unified system and there will be one center located in Cheyenne. There won't be any duplicated database. It is a joint database, in that they are going to merge bibliographic records with separate holdings information for each library that joins, but it isn't done yet. A long way from being done.

Question:

The holdings file, is it ?a search field?

Epstein:

Usually, what you can do, in their particular case what you will be doing is searching for it and then you'll find out who holds. Take it back, if you are in library A, it will be set up so you will see library A's holdings first. But if you are in library A and library A doesn't hold it, you will see everybody else's holdings. One of the things I don't know is whether they've resolved the question of who is going to be able to see. I'm working in a remote area of Colorado with lots of scattered libraries with great distances in between them and they have made a conscious decision that when the public uses the public access catalog module of this joint system, they will only be able to see the holdings of the library they are actually in. They must ask for staff intervention before anybody can see the holdings of another library. That's being done because they're afraid that again, the reference interview type of problem, that people may

not be searching for the right thing. They may find material which they will then, in turn interlibrary loan, which in their neck of the woods takes a long time, and which they may be able to satisfy the user's need with other material located in the building the user is in. So, there's some interesting questions there. What power to you give to the public? But we're getting there. Now, there have been a number of decisions on the part of several other states not to go with the statewide online database because of the size, California for instance, which although it produces a fiche product which is a state union catalog, it does, by definition, exclude the University of California and California State Universities and Colleges and Stanford. Because if you put those in, you'd never get through it and we'd never be able to afford the fiche. It will not go online. A similar thing happens actually to the California union list of serials called CULP which is available to anybody else on BRS online. It does not contain Stanford, Berkeley, or UCLA. Again, deliberately. They have their own union list of serials which you can use as your second source.

I want to thank you all for coming. I want to remind you that I do want your written comments about anything. If you'd like to submit something that looks somewhat formal, and you'd like reproduced in the reports that I'm doing, I'd be very pleased to get that. If on the other hand, what you'd like to do is to drop me an informal note that says, "Please don't forget about X" do that too, because I'm going to pick up a lot of things, but I'm not going to pick up everything. It does no harm, whatsoever, to trigger me to thinking about something that you are interested in. Remember also, tomorrow morning nine o'clock at the State Office Building, Room 113 and tomorrow I get to listen. So please, come prepared to talk. Thank you.

Gary Nichols:

For those of you who were not here yesterday, I would like to just briefly introduce again Susan Epstein. She is someone who resides in Costa Mesa, CA, who has been in this area of automation and automation consulting for some ten years and as many of you know is a pioneer in that consultantship. Susan has worked with many state library agencies throughout the country, Connecticut and Colorado, Hawaii, Wisconsin, California, her home state and many other states. She is a regular feature columnist for Library Journal and has written many articles. I think many of you have read them in Library Journal on the field of library management and automation. Susan has a B.A. in Economics from Wellesley College and a Master's degree from Immaculate Heart in Los Angeles, CA. She has worked in a number of libraries, public libraries, county libraries in California. She was the Assistant City Librarian for Huntington Beach, CA and also special assistant to the county librarian for Los Angeles County Public Library and also has worked in programming and system analysis work for IBM, Control Data, and Harvard University. So, Susan, it's a pleasure, again to have you back this morning.

Let me tell you a little bit about this morning's format. As I mentioned before, I wanted to make it formal/informal, but make it comfortable for you because we want to record what you have to say. So if you wish to present any comments, you may come up here to the podium, or we feel that within a reasonable distance, we can bring the microphone out to you. This is the day when we impart information to Susan so she can consider all the elements of opinion as it relates to developing a statewide automation network in the state of Maine. That's important because we want the report that comes out and perhaps, eventually, legislation, to relate specifically to the state of Maine, of course, and to our own particular requirements and needs. So, it is important to hear from you. We will have, if we run out of formal comments, we will also, perhaps at that point, switch to some topics that have come to us in the general discussion through the Automation Committee and from people who have telephoned and talked to me, for example the role of medium sized or small, rural libraries in the whole automation scheme. So, we can pick up on those themes if they fail to serve us as the result of more formalized testimony. We hope that this is an extremely informative day for you, Susan, and for you out there in the audience. Jack, have you got a longer string on a microphone there?

Voice:

I think what we'll do is set up a microphone back there.

Gary Nichols:

All right. I think that'll work just fine. O.K., now, Susan did you want to make any introductory comment or did you want to move right in? (No) O.K. We don't want to make this so formal that you're not free to move up and take an extra cup of coffee or tea and a smorgasbord of calories here any time you want. We can break more formally, perhaps around a quarter to eleven if you want, but feel free at any time to run up and help yourself. This is a peculiar arrangement in a way, it's almost like this table is the feature thing this morning, but we'll try to make the best of it as we can. O.K. With those introductions, then, I'll once again thank you for your return here. For those new people today, I don't know who's come here with what to say, so I don't have an established list of people to point out and call upon, but at this point, in order to warm things up, I'll ask you out there, and whom would be the first to make any comments or to make any statements. No volunteers. This is going to be a hard meeting.

Audience:

My name is Julie Tallman and I'm from Old Town High School and I represent a small high school library in the state. I have two concerns. We're just starting. We purchased Commodore en masse about four years ago. It has proven very ineffective for library applications. The word processing program, for me, is extremely difficult to learn how to use and so far I haven't been able to get a hold of application software. I know there are some good Apple programs in the state. I think maybe we're going to be able to get one Apple in the library for me to share with the students by about the end of November, at least my principal has sort of promised me that. What I would like to know is the best application, most successful application software on Apple that people have been using, the ones people have had problems with, the ones to stay away from, the glitches in the programs, in other words a pretty good review of what Maine people have been using, how they've been using it, the kinds of information they can print out on it. Also, I'm wondering if maybe sometime in the future, as we advance in technology and we have a pool of used computer equipment, if maybe, maybe this is totally impractical, but if maybe we could have access to a pool of used computer equipment on loan for a little while to see if maybe two computers in the library would be a good answer to some problems. If maybe when somebody's ready to get onto a computer and cannot get the equipment for four or five months because backorders are so long, we could have one on loan for a little while so we can get started.

Susan Epstein:

I think it is a very good idea. Karl Beiser had given me the list he's developed of micro applications in the state of Maine and I think that you should, as a first step, look at that. I mentioned to him that one of the things that I was particularly taken with are the number of people who happen to be using the same program. Without certainly any bias towards or against these particular programs, there are a lot of people using OverDue Writer and also Riley Card Typing which gives you a source of people to ask about that. I think that as more standardization goes on, it's going to really help, because, as you say you will have the expertise of people who have tried it. There's a tremendous reluctance in the automation field to ever talk about anything that didn't work out the way you hoped. The University of Illinois has a symposium every spring on data processing applications and they, a couple of years ago, tried to have one on data processing failures. They finally put together a panel of speakers, but it was the most coercion they had ever had to use to get speakers. Usually people jump at the chance to speak there. In this case, people were saying, "No, no, no. Nobody really wants to know what went on there." In the end, almost everybody who did speak, spoke about their failures, but they also had had a success later that they could report on so that they felt that maybe they could save their reputation at this symposium. I think there is a reluctance for someone to stand up and say, "I've been trying to use this program for months and I can't get past the demo disk." I think that there is a necessity to start doing some of that. I agree with you on that. You've got some good ideas in there.

Gary Nichols:

Thank you. Susan, when you feel appropriate, either you or I will follow up with some comment. So, once again, back to you. Is there anybody else who would care to make a comment? I know there are some people out there. I know there are some hard feelings on this, on where we start in the field of automation. When you come up, it might be helpful to us if you simply identify yourself and what library you're working at.

Audience:

My name is Rick Speer from the Lewiston Public Library. I'm not sure I really have a whole lot to add. I consider from what I heard yesterday and what I've heard about the Committee, I think we're in good hands here. I was impressed with the consultant's report yesterday. Basically I have three areas just to emphasize what Susan brought up yesterday. I feel that the report should cover. One was mentioned by the first person, in general, microcomputer application support. I think we have a great system going already in Maine. I'm new to the state, I was very

impressed with Karl Beiser's work and the networking and sharing that goes on already, but I would like to see increased emphasis in this area, possibly to the point of having a full-time microcomputer consultant. I think that there's a lot of sharing that could go on. Another seconding of the consultant's message yesterday, I would like to see an emphasis on online information services. I really feel especially in Lewiston, that the way we're going to develop the library program is to push practical information services. We feel that as far as attracting readers to the library and people wanting a library for cultural support, that we've probably pretty much reached the majority of the community. We feel we have a big market out there for practical information that we haven't even begun to tap and I think it's critical that people in general in Maine perceive public libraries as having quality information available, quality practical information. I think most people as I attend meetings and talk to various groups, most people are somewhat aware of the online services available. Very few people know how they're used or have used them or have had direct contact with them. I think it's very important that they know about TeleMaine. That they know that online services are available through their local library before some other access point is developed, either through corporate access or commercialized information vendor, whatever. I think there are some ways that we could expand TeleMaine and that the consultant's report would dwell on those. Some thoughts I've had is to increase the P.R. I was amazed when I came to Maine and found out about the availability of TeleMaine, but I talked to some people mainly from smaller libraries and not everyone's completely aware of just what is available and how you tap into it. I think just some communication among the small libraries, promotion within the profession would help. Also some simple ideas like an 800 number might help out.

In general, I'd like to see the publicity emphasize online services available at the local library. That would allow the flexibility of the local libraries to develop their services or to merely be the first point of access for online services. I have a few thoughts on statewide integrated automation, and, again, I've been trying to learn in the past year about the options available to us for a local integrated automation system, so my knowledge in this area is rather limited. I guess the only thing I'd like to push for, I'm sure it will be in the report, is some standardized local integrated automation package. One question I would like Susan to answer is, can you develop a standardized package and get it cheaper if all the libraries in the state were to go in on a system as opposed to individual libraries?

Some thoughts on the obvious - it should handle all of the internal operations of the library, be powerful yet flexible, so that it would serve the needs of both the large libraries and the smaller libraries who would choose to get into it. Also, an electronic mail component would be very important, I feel,

especially with the option with an interlibrary loan component built into that. The whole idea of resource sharing I really know nothing about in terms of automation and I don't know what is the expense involved. It would be nice to get all the small to medium and all the large libraries in the state on one network, accessible to one data bank. I don't know if that's economically feasible or not. I would hope the committee would look into that. Regardless of the set-up, I feel we should have direct online access to at least some of the major collections and hopefully would include a powerful subject access point. And one other thought: I don't know if it's the role of this committee or this consultant to address, but reimbursement for net lenders of interlibrary loan. If we developed this automated system, there's going to be a lot of net lenders that the figures skyrocket on. They've been extremely cooperative from what I've seen up to this point. There certainly would reach a level where their cooperation would diminish somewhat.

My only other thoughts are somewhat personal opinion on state support. I feel very strongly that cities and towns should be funding local library service and the state of Maine should be funding interlibrary cooperation, reference and information backup, consultant services, communications, networking support. I feel, like most people here, that the state support in Maine is abysmally low, that goes without saying. I feel that at this point it would be a mistake to try to raise that support much for direct local service. That probably wouldn't be too popular with a lot of the smaller libraries in this state, but I really feel the needs of all our citizens could be more directly met by state monies going into technology to aid resource sharing, interlibrary cooperation, the things that the state should be involved in.

Susan Epstein:

Let me address the one question that you actually asked me about the costs and what would happen if we did some statewide buying. At the moment, it costs a vendor approximately \$10,000 to respond to any request for proposal for any automated, integrated system. I've been told that now by three different vendors, so I believe it's probably a good ballpark figure. So that if we can set up some systems where we would guarantee a certain vendor a certain level of purchasing, we can get some reduced prices because we would not force everybody to go out to new bids all the time. It would basically be done through a statewide contract that you would purchase from. The same thing is true, for instance, in buying terminals. Every vendor I know has quantity price breaks on terminals. It doesn't make any difference where they're located, if you buy one it's a lot more expensive than if you buy one or two hundred. On the other hand, we don't want to limit ourselves too much on the particular vendors. I know that my report will not recommend a vendor, because there are so many variables and one of the things that will make a difference will

depend upon when we actually have some funding to go ahead on this. The systems are in a very dynamic, evolving state right now and what might be the best to do right now, might not be the best later.

What I definitely will recommend is some standards, as you suggested. That there are some things that will enable one system to communicate to another through the open system interface in particular and that would be a basic requirement of anyone who wanted to bid on a statewide contract here. But, I would probably recommend some sort of statewide contract. The other thing that I think we seriously have to look at and we have already put to work, the looking at telecommunications links that exist in the state now and that may exist in the next three to five years. That may enable us to have more libraries actually sharing the same computer than has ever been possible before. Whether it is done so that you are looking at very partitioned patron databases, for instance, and shared bibliographic databases which you're going to need for statewide resource sharing. Or whether you look at a system where to the system, you almost look like branches of each other. Those are all feasible.

One thing that is true, that as the size of the system gets larger, the cost per terminal attached to the system has been dropping considerably. The very small systems, at the moment, are the most expensive systems per terminal attached. If you put a system in with, say, about eight terminals, you're going to find yourself with a per terminal cost, if you take the whole system cost and divide it by the number of terminals you have which gives you some idea of the power of the system you're working with, you almost always have a much higher per terminal cost than you do if you put say 100 terminals on a system. And that is something that if we can bring the telecommunications costs down to make up for that difference and use them not just for resource sharing, but all the time, whatever lines we are using, we may be able to get some big systems that are much cheaper than if each library went out and did something on their own. But there are lots of different ways we can look at it and it is certainly true that by going together, we will all save money.

Gary Nichols:

Thank you, Susan. Thank you Rick. I will say that in terms of the state aid for ARRC Centers, I don't think it's abysmally low, I think it's fair compensation for the services provided currently. It may change in the future as costs go up, but right now I think it's alright. Where it is a disaster is in the direct support. State aid per capita to local libraries. I think that I'm intrigued with your thoughts about relating that in a way toward a statewide program and a statewide effort rather than dollars that just go from the state to a local community

that uses those dollars to offset programs that currently exist. That has problems and has a lot of difficulty. So, we have been talking, MEMA and the Maine Library, MLA and myself, we've been having some preliminary meetings with the Commissioner and talking about state aid and how we're going to approach it in the next legislative session. We'll be talking about that at the next Library Commission meeting, too, where we really believe that it's ten cents per capita now, the national average has been about 85 cents per capita nationally. So, you see where we are, probably next to the last. Thank God for Mississippi. They're always last in the rankings, we go right after Mississippi. If we go to the Legislature and ask for 60 cents per capita, we're still not anywhere near the national average and then we ask for 60 cents and they give us 30 cents and then that will be O.K. for a year and we'll go back and ask to be somewhere nearer the level that we asked, still behind the national average and that sort of thing. That goes on and on and as the Commissioner has pointed out, it's a self-defeating process. You're going to exhaust the Legislature and exhaust yourselves always fighting for cents everytime. It's a shame that this becomes the prime focus of your efforts because there are a lot of other things, of course, that you would like to do.

So, what we're going to work at is a formula, some formula that is tied, an escalating formula that's tied, perhaps into a national average or some way to relate that support into specific programs and services so we don't have to fight this battle with the Legislature. Certain issues we'll have to fight for year to year, but maybe not the state aid one. So, we're going to really be discussing that in some detail with the Library Commission. I think the Commissioner is right. We've got to find a new and different way for approaching the whole state aid. Ben Keating has sent out a survey to every state library agency in the country in an effort to make an analysis of the formulas they're using for state aid, how they distribute it, what the local basis and local incentive is, and the share of that locality is in order to receive the state effort. We've had, I guess, an excellent response to date, probably 80% of those state agencies have responded and we're still getting some in, so I think we'll have an excellent return on that and we'll come up with some interesting findings and conclusions from it. Now, back on again, to you. Who would like to venture an opinion at this point?

Audience:

I'm Linda Gufstafson. I'm at the Pittsfield Public Library which is considered a small public library. It's on the large end of the small size. It's medium in some ways, but I think I can speak for some small public libraries that are much smaller than myself, in terms of attitudes. Attitudes are the thing that we have to deal with a lot. Even though I've been to a number of workshops on computers, computerization, even though I've read a

fair amount, even though I've had some classes, I still find the whole concept scary and I find that most lay people, especially my trustees, don't want to talk about it at all. They don't like to think about it, "Oh, that's an unnecessary expense," and I need somebody who's more articulate than I am and more versed in the field, to explain in lay terms, what computerization can mean to a library such as ours and smaller. The people on the town council who give us our funding are willing to go for that sort of thing. I don't know whether I speak for most small public libraries this way, but the things that I'm particularly concerned about, the things that I most want from computerization are to be able to have the entire holdings of my library on a computer. I would like to have an inventory. I would like to be able to punch a few buttons and know who has a particular book, where it might be, who has that record, who has that cassette, that sort of thing. I would also like to be able to handle all circulation, billing, overdues, inventory, on a computer. Those are my primary desires.

Gary Nichols:

Thank you, I'd like to do those things, too. Did you want to make a comment? Oh great, Steve.

Steve Hilyard:

This really is in the form of a question. Steve Hilyard, University of Southern Maine, were Susan to speak to the five options, five are they not, that you are to address in the R F P so that we know the purposes to which the consultant is here with us in Maine.

Susan Epstein:

To be quite honest, I probably can't list them off, one, two, three, four, five. Some of the things we are looking at, however, have to do with one statewide system. We're looking at systems which would link different types of libraries, at least this is what I'm looking at. I am looking at systems whereby we have a very limited number of libraries online and we allow some sort of access ranging from a telephone up to a terminal into the database. Frankly one of the other options I'm looking at, and perhaps this was really what Steve was getting at, is that it is possible, despite all this enthusiasm and what we're looking at, that one of the options that is mentioned in the Request for a Proposal for a consultant is that Maine not do anything in this area. I frankly think that this is a very healthy attitude to take. I don't like going in where there is an assumption that the problem will be solved that way. What I hear, however, is that we have at least a core of libraries that will profit from almost anything we do. I certainly will be recommending some

movement toward automation even should we decide that at this point, with both technology and the financial issues, that this is not the thing for us to do. The kinds of things, for instance, we've heard this morning, some of the things on microcomputer clearinghouses that can be supported at the state level, which are really not statewide automation in the sense that the report is really aiming towards, but I think that it is very important.

I know that in one particular state, among a laundry list of recommendations that we made, most of which very fortunately they have been able to implement, there were two that have turned out to be even more powerful than anything we ever thought they would be. One was the recommendation to the state libraries that they hire a full-time automation consultant. At that time they did not have one and they now have three of them on their staff as interest has grown in the state. The other thing that we suggested they do is that they hire an outside consultant to work with a given library to go through the entire process of procuring an automated system. The state automation consultant at that time was trained in the same technique and that library made a commitment to share documents and expertise with other libraries throughout the state.

Now, this was a state where it was very clear from the beginning that a statewide automation system was not a possibility. There were too many pieces in place and some other things. That also turned out to be an extraordinarily successful situation. It was made even more interesting when in the midst of all of this, which was looking like a typical turnkey procurement, the city got into the act in this particular town, and decided that we would use their Hewlett-Packard machine. They ended up dealing with not just the technical issues, which is what they expected to deal with, but a whole primer was developed on dealing with data processing departments, dealing with city officials and then, indeed, negotiating contracts, not for turnkey systems, but for software providers and how to keep your own data processing department in line. That is probably the trickiest thing, and the local data processing departments don't sign contracts that guarantee their time or costs. Those two things turned out to be very beneficial in that particular state, aside from the other things they've done which have gotten a lot more national publicity, so, I really am looking at services to the libraries of Maine.

It is by no means a foregone conclusion that the only thing I am looking at is some mammoth system where everyone is going to have a terminal, we'll all be connected online. I think that although we can dream of that and it certainly is something that I would hope to see eventually to build on your current state of cooperation, I think that to expect to do that in the near future with Maine's financial resources is guaranteeing a report that will end up dusty on some shelf somewhere. I think that one of the things that we will definitely be looking at is how do we

begin by putting some pieces in place and allow others to join later when the financial resources and the mechanical resources are available, when we have enough machine-readable records. How do we make the joining of other libraries very easy so we don't have to scrap any materials. We don't have to scrap the database, we don't have to scrap the computer. A real concern, of course, is computer obsolescence. How do we deal with that. What I will tell you is don't worry so much about computer obsolescence, the thing that will live with us always is the database and I will be spending a great deal of time talking about the database.

Gary Nichols:

Does that fairly answer your question? We'll be looking at the type of access, where do we begin. Although Susan has mentioned that she won't be recommending a vendor, a menu of vendors and costs and options and phasing are certainly all the considerations we'll be looking at in the study. One of the concerns we have, of course, too, is how then do we integrate the effort that's taking place within the public, academic, community, university system into our efforts and we certainly have representation on the Automation Committee to help that succeed and help that take place. If there are any academic librarians here that they might want to address that too. Steve or Don you might want to venture a comment and Art, I know is here in the audience too. We talked a little bit about this yesterday and, you know, we have some concerns there and how that's approached with the private academic institutions, so I'd like to steer it that way. But, I think while we're on the academic phase of it maybe it would be interesting to hear. Don, did you want to say anything?

Don - unintelligible:

The Chancellor of the University of Maine system last year, at about this time, charged the system library directors with producing a proposal which would resolve the problem most common to us all, for which the solution was automation. He was wise to say it that way, because if he simply asked us all as library directors, "What is your single largest problem?" some of us would say book budget, some would say crowded facilities, some would say insufficient number of staff. So that, he really boxed us in and we spent the fall, winter and spring commuting from the points of the globe to Orono and bloody, but unbowed, presented to the Chancellor in May, was it not, Don, June, a lengthy proposal for system wide library automation. I will take what Susan said yesterday and underscore it, though we produced a proposal for an integrated library system, we recognized that there is not yet such an animal. Neither did we call for a particular vendor. We called for functions, features, access points, services to be provided, and the obvious elements that

have to trail off from each of those items. The council of presidents of the seven campuses have endorsed that proposal. We were under the mandate that it be provided in time to be presented to the special legislative session. I understand that in fact it was not, but will come up in our next biennial budget request to be presented to the Legislature in January. But, the University of Maine system has a fairly mature, semicomprehensive, "integrated library system" plan for the university campuses in the hands of the Chancellor and it will, in January, be in the hands of the Legislature. One of our concerns was the degree of coordination between our efforts and our timetable and the Chancellor was uninterested in yielding on his timetable and the efforts of Gary, Ben, Don, Karl at the State Library and those folks in MEMA, MLA, etc., who were working at only one or two months removed to come up with the activity we have before us today. We very much hope that we will not find ourselves as the University of Maine system, planning on implementing an XYZ system and then the consultant either has to accommodate to that reality or the state chooses to do an ABC system. That sort of coordination is going to be aided immeasurably by the fact that Elaine Albright, director of libraries at Orono is a member of the statewide Library Automation Committee. I'll be glad to answer any questions. I believe that our proposal is a semipublic document, as we are paid with your tax dollars, public pronouncements that we make, of course, are available to you. We provided that proposal to the Chancellor at his charge, so that we would feel that any requests to see that should appropriately be made to the Chancellor's office.

Susan Epstein:

On a further note on that report, Elaine indicated on Monday that there will be an attempt to make that the University of Maine's communication and testimony to this report. It will come in and that is another way to get it. It should come as a part of the documents of this report itself, and Elaine is working on getting that for us. Thank you.

Gary Nichols:

I have it. It was just delivered to me. I don't have any qualms about the timing of events that are taking place at the University of Maine at Orono because we're hoping to have our study prepared and ready for the regular session of the Legislature too. The advantage that the Chancellor's office has that we haven't in our type of bureaucracy are the funding mechanisms. He has a lot more flexibility as to when to push things into the Legislature and we have to reach certain deadlines and certain requirements unless we have a Legislative friend who will turn those keys for us. So, we have to follow a different routine in terms of submitting it, but I think it's going to come together and mesh well. Art and I were talking

about all the work we need to do in terms of retrospective conversion of collections that exist in the medium sized libraries. We're almost, if not fully, complete at the State Library, but I know that many of the private academic institutions aren't there yet. So, there are some baseline homework that needs to be done. That's one of the things that we'll be considering in this report too. In an effort to reach an automated level, you have to make your own records machine-readable and that may be the first phase, to do that. But it's an unglamorous, relatively unglamorous, activity to take place. On the University campuses for example, you don't have any demonstrable thing going on to really bring to your powers that be for funding. Anyway, it is something that we want to closely consider, too. Art, did you want to say anything in that regard?

Art Monke - not on microphone:

I really don't have anything to add to _____. We've tried to _____. We've talked about this for a long time and we have no specific plans in mind. _____ We're nowhere near the point of making any kinds of requests for proposal. We do have the problem of getting our, some of the institutions have got their records in machine-readable form and _____ we, for example, have not got more than 15 % of our records in machine-readable form. A formidable job getting _____. Now, I think as it had been pointed out yesterday, you don't have your complete records available, you don't have a very satisfactory system. This is the sort of thing that I personally would worry about a great deal. _____.

Gary Nichols:

Thank you, Art. All right, I'd like to receive some further comments. Thank you, Nancy.

Nancy Bell:

I was impressed with what Art said because I spent about seven years at the Library of Congress working with machine-readable cataloging. My name is Nancy Bell and I'm at the Van Buren Secondary Schools, so I'm at a high school and I can guarantee you that we have very few shelflist cards with ISBN numbers or LC Card Number on them, so it would be a very expensive process to automate the total collection. About the only thing we could do, I'm adding ISBN numbers to all the cards at this point because I have electronic memory typewriter. Last year I only added them to the shelflist card, but I've started because I realize that was the unique identification number for that book and that some

day it would be very useful if a high school library should automate in the state. So, I just want to emphasize the importance of that. It was brought up yesterday, but if you're not putting your ISBN numbers somewhere in that card, you're going to be in trouble if you ever want to automate or if a future person would want to automate. They need it.

Yesterday I was also talking to I think the librarian, I don't know her name, but she was from Cape Elizabeth and she had a question that she wanted me to ask today and it was something that had tickled me at the same time, so I thought, well, I'll ask if you have three or four copies of the same book, but one of them might have a different publisher or a different printing or date or whatever, do you want copy one, copy two, copy three, copy four with your call number and do you want four different cards or what would be the best as far as automating as fixing how many copies of the same book you have? What's the best way to set it up? I wasn't very sure myself and I know you alluded to it yesterday, so I thought that would be a good technical services question to ask. And I really don't have anything else to add other than I think that it is important to keep to

(end side one)

(Same speaker)

the complete MARC program and don't make too many changes from it because you might discover that as a state library, you might say that we don't need this. Well, later you may say, yes, it would be nice to have that because we could serve our constituents in this way. So, my recommendation as a person who worked with MARC is to accept the programming that is being done at the national library, bring it down to the state library and I don't know too much about commercial vendors and all that, I know that this is the way the national library wants state libraries to go. They don't want a monolithic system, but looking at it from a budgetary point of view, I wish that they didn't necessarily, that they would provide a little more federal guidance to the state libraries and it would be cheaper. That's just a feeling I have.

Susan Epstein:

Let me give you two different answers to that question. Maybe that's part of being a consultant. First of all, I'm so glad to hear that people are really putting ISBN numbers on cards. Don't forget LC card numbers also, because, some of the databases don't hold ISBN's because there are too few books with ISBN's in them in the total database. If you've got both numbers, you're in

really great shape.

There is a real problem and you've hit on a very good one. Technically, let's talk about from the purist point of view first, technically any book which has any difference in its bibliographic description from another book, is a separate bibliographic record and is a separate book. Therefore, we should have a separate title record on the database. That's the purist view. It's one that I hold to very strongly in almost all cases. The problem arises, quite frankly, with libraries which over the years have acquired not the first, second and tenth edition of a nonfiction work which they generally have been comparatively good about keeping on separate catalog cards and separate records, or a beautiful N.C. Wyeth illustrated children's classic which they have kept on a separate card because they know that some people ask for it that way. It's when you acquire yet another copy of Tom Sawyer and what you are really doing is looking for whatever one happens to be in print. You're buying an edition which has no explanatory material, no particular notes, it's not annotated in any way. If the illustrations are in there, they're certainly of no consequence and in your way of thinking, that book is identical, as far as filling your patron's needs to another copy that may have been published ten years ago from another publisher and it is sitting on your shelflist as copy one and copy two. One of the things that, frankly, will have to be settled as we work on this is exactly what we do with those titles owned by various libraries. There is a middle route that has been followed by a number of libraries faced with these situations in setting up bibliographic standards that somewhat compromises from the ideal of the separate bibliographic record which says that in addition to the separate bibliographic records for as many editions as are already cataloged or can already be identified, such as an edition in this case which might be located in libraries which already have machine-readable cataloging, we can also set up a record which just says, Tom Sawyer and we can say various editions. It is not as clean. It is much better to do it one edition at a time. For some smaller libraries, this may be very difficult. Obviously, if what you are doing is going looking for a particular version for a particular patron, you cannot use this bibliographic record for your searching and you won't be able to search on illustrators or whatever. I think that is the type of material we are talking about.

There are also some problems in a lot of libraries where they have taken the hardback and the paperback edition of the same popular fiction title and put them on the same catalog card, the same shelflist, even though we're talking about different publishers, different years of publication and different pagination. And yet, the books for the purpose of that library are identical. We do have some problems and some compromises that will have to be made. I really don't like to take the cop-

Congress does not offer those services. It works only for itself. The Library of Congress has a very interesting dichotomy. It never has called itself a national library. It acts in the function of a national library when it serves its purposes. When asked to serve as a national library, you'll find that it's very much involved with "You'd better get us named as the National Library, if you want us to do those functions."

The Library of Congress has been leading a number of committees, including the Network Advisory Committee called NAC, which has been in operation for about ten years, we've been working about eighteen years since the beginning of the MARC Advisory Committee. They are not promoting this work. This work is being done primarily by commercial vendors because Library of Congress is unwilling to do this. The commercial vendors are buying the Library of Congress cataloging tapes and are manipulating them. The priorities of the Library of Congress are to serve their own constituents and to serve the nation's second and they're very open about this. The question of subject authority tapes today is probably the clearest example of all of that. The library community as a whole has been asking the Library of Congress for four years to put the creation of an updatable subject authority tape as a very high priority in their automation development schedule. We have been told repeatedly that it is not possible. It is now scheduled for 1986. We began really very strong campaigns back in 1979 and '80.

The commercial vendors, meanwhile, have devised programs to take the original tapes from the Library of Congress, which now come out once a year or less, they're about two and a half years behind at the moment, and they sit down with the Library of Congress Cataloging Service Bulletins and make the update changes themselves. Each one of the commercial catalog vendors is doing that. If you want a magnetic tape of current subject headings today, the worst place to go is the Library of Congress. Their tape is 2 1/2 years behind. Brodart, Autographics, General Research, WLN, RLIN have a tape which is up to the moment. I think there's an unwillingness of the Library of Congress to take that role and part of it has to do with this whole issue of "Is it our National Library or not?" As you are probably aware, it has never been named the National Library. They are very anxious to be named the National Library and they feel, however, that the push to get that done must come from the field and everytime something like this comes up, as I say, I've been in a lot of discussions with NAC members, with Library of Congress members, Lucia Rather is a very delightful person to talk to, she is head of the cataloging division at LC. They are very, very emphatic that their constituents are the users of the Library of Congress, not the nation, and that their priorities will take precedence. Yes?

Off mike, from audience:

Why don't they have that name?

Susan Epstein:

Well, it goes back a long way and it's really a very political issue and this is a fight that has probably been going on fifty years. There are some funding implications that a lot of libraries, frankly, are not willing to have the Library of Congress named as our National Library. The Library of Congress, so far, and I think one of the things that's led people to say maybe we don't want them named as our national library with some of the implications that go with it in setting policy, is that they are so concerned about serving their constituents and they are a research library. They have very few people on their staff who are concerned about the needs of other libraries. I think that has become clearer in some of the debates that have gone on about subject headings.

Over the years, there are a number of us who have discussed with them a set of headings which we, for want of a better name, have called Public Library Headings, much like the National Library of Medicine and the National Agricultural Library Headings which you sometimes see on a catalog card. About ten years ago, I started talking to Lucia Rather on this subject and Mary Kay Petris who's head of the Subject Cataloging Division at LC. My feeling on that is that what we want to do is for LC to keep the headings they're using now. They can keep the NLM headings. They can keep the NAL headings and then also add the more common public library headings. Now that we have machine-readable catalogs, it is no longer necessary to limit the number of headings that any one title has and my feeling is that any library should enter all the headings that Library of Congress could provide. Therefore, when a patron walks into your library, whether they're a person with a layman's knowledge or a specialized knowledge and they go searching on a heading, they will find the material under whatever term they use. I think the most ironic thing is that whenever I talk to them or any of the higher-ups at the Library of Congress. When I talk about the needs of public libraries, I keep getting this response that they are working with a public library and the public library that they always cite is New York Public. Now what they're doing is working with the Research Libraries of New York Public not even the branch libraries of New York Public and the branch libraries of New York Public, because of their connection with the Research Libraries, are in no way typical even of the country's other large public libraries. I think we have some real problems there. It would require tremendous budget infusion, if they were ever going to become the National Library of the type that we see in other countries, providing services to the other types of libraries, well beyond the kinds of the things that they provide for their own

constituents.

Nancy Bell:

That's a good answer. I guess what I'm concerned about is the information retrieval functions which they have created at the Library of Congress. I think it's far superior to what OCLC had, at least it was a couple of years ago. And why don't we buy that information retrieval function from them or are they selling it to commercial vendor to sell it to us or are we losing out because the commercial vendor has programmers working on it, but the work has all been done at the national library. It's working beautifully for them in computer catalog. Are we going to get the benefit from that, can we buy that program from them?

Susan Epstein:

I don't think we want it. I think, frankly, we're talking about their information retrieval sources. They have two online catalog sources, one called Scorpio and one called Mums, that are currently operating in the Library of Congress for public access. They were part of the Council on Library Resources study on online catalogs which studied 27 different online catalogs, some of them coming from single sources, such as the Library of Congress or Ohio State University or the University of California, some of them coming from commercial vendors and I don't think that it is at all clear and Scorpio and Mums are the national standard that we should all strive for. Each of those services has a number of deficiencies compared particularly with some of the other ones that are out there. I think that again, it is very clear they were written for their users. They require a certain intellectual level to be used and they also require (I think that this is one of those things that is very important for those of use who are talking about putting public access catalogs in actual libraries) in the Library of Congress, for public use, those terminals are clustered in areas with librarian assistance continually. They have about one librarian for every three to four terminals. I know of no other institution in the country that is providing that kind of assistance in using the online catalog and I think that's part of the problem, although they have some very good things that they can do. For instance, only one of those two services provides key word searching, which is a very common feature in most online catalogs today. The other one requires exact knowledge of Library of Congress subject headings.

They also do such things as get to the end of a screen and don't tell you what to do next, because they assume a continuity of users, not necessarily the user friendly aspect, which is being developed and is turning out to be crucial. I think that in the various meetings that have scheduled by the Council of Library Resources on the subject of online catalogs, subject access,

etc., the role that everyone has been asking the Library of Congress to take is not the role that you're suggesting, but please, please do something about improved subject access. That if they are going to provide a service to the nation in furthering online catalogs, the thing that they must do is do something about subject access, improve subject access.

At the moment, the Library of Congress assigns an average of 1.4 subject headings per title and that must change if we are going to use online catalogs. That is very clearly within their current mission, it is within their current staff capabilities and yet, if you read the proceeding of the Wyse Conference which was held in December of 1982 in Virginia which deals with subject access, the Library of Congress sits there and backpedals the entire thing. So, I think that that is not the place we can count on for the future. They have done a number of very interesting things, but they have really been for their own users and I don't think they're very transportable. It is actually the same problem of some of the very exciting online catalogs that we're seeing coming out of some of the academic libraries. They're really great. They have some interesting features. I don't think they're going to be transportable for the nation at large because they aren't designed to be used by the general public. I don't know what you are going to do when you have somebody who can barely read or somebody whose native language is not English and it requires the use of incredible numbers of symbols. Frankly, that's one of the things that commercial vendors are doing for us, because that's their market. Interesting problem.

Gary Nichols:

Well, we don't want to talk too much about Library of Congress, but it is a fascinating institution in terms of their rapport with the State agencies. They hold a congress of state librarians every third year on topics of our choice and they're extremely supportive to us in the field. I think there's a split personality regarding whether or not they want to be the national library. They have, of course, mixed feelings because they have tremendous problems. They don't have the support right now from Congress to do that.

Unknown, off mike from audience:

They themselves, anybody doing research, and their librarians, for example, knows that she can get to her subject thesauri better _____ the LC classification system. Not necessarily true about subject headings, which are randomly supplied by their subject catalogers and are not very good, as she stated, but that's why a person doing thorough research, anybody working on a doctoral dissertation, a master's

thesis may want an exhaustive research, does cross reference the classification system to get the total listing of books, because that will work better than the subject.

Gary Nichols:

Well, one of the things if we have time, we may want to have you address again is their Optical Disk Storage Program which they've developed quite on their own and they don't have any vendors involved. It's totally contracted and devised and researched and implemented through the Library of Congress. Therefore, they've spent millions of dollars in effort and time in developing this which has, I think, a very significant impact on what we're all going to be doing in automation in the future, but they add one book every 15 seconds, they've got an aging collection with severe preservation needs. Space, monumental space problems, they've got the new Madison building, which believe it or not they've already overgrown and if any of you have been in the Madison building, you know what a facility that is. Six city blocks long, every floor, it's unbelievable to think that in only a couple of years time, they're already having problems with space and they're in the Madison building. You have a problem with print resources and hence the effort with the Optical Disk Storage Program and they have a real problem with preservation of their aging collection and their need to preserve materials which they are also investing a great deal of resource and effort in and trying to get a hold of that problem too. But, anyway, enough of the Library of Congress, maybe we can pick up on that later with the Optical Disk Program that they're having. What I want to do at this point is to take a brief break, come back at eleven, and then what I'd like to hear from, so we don't miss, and I think we're all interested in, is how do we include the smallest public libraries in the state and the medium sized public libraries, our rural libraries, with a sense of participation in the system and how that might be devised and what opinions you all have on that. So let's come back at eleven o'clock.

(Break)

Gary Nichols:

..... So that we don't miss the opportunity for the people here representing smaller and medium sized libraries who I know have a lot of concern of how a system affects them and maybe Sue can share with us in the process of looking at that, ways in other states where that problem might have been taken care of or at least phased in or looked at. O.K. So with that, do we have

someone who would like to venture, I see many of you here, from the small or medium sized libraries. Petey? Thank you.

You're nervous about the back microphone, I don't blame you, it whistles at you.

Martha Pawle:

My name is Martha Pawle. I am the librarian at the Prince Memorial Library in Cumberland Center and I am also, although I am not speaking in an official capacity, because we have not got a statement from our board or our organization, but I am the secretary of the Small Public Libraries Association. I can promise Susan that you will be hearing from us, but I did want to make a couple of comments in this general area. I am sure that librarians in small public libraries have a great split personality with regard to this whole thing. We would all love to get our circulation done for us by a nice machine. There are lots of things that automation can offer that we look forward to with a great deal of enthusiasm and it's very nice, I may say, to have it explained in words of one syllable, as well as it was yesterday. It was a great help.

The other side of it is that a) it looked very complicated to do and b) it looks very expensive. Both of those are big problems for small libraries. We have also, of course, pushing us towards it, this great desire, also, to be able to provide our patrons with the things that they ask us for. The thing that does this as well as anything else around here is the Interlibrary Loan system and it seems to me that perhaps this is a point of access to concentrate on in terms of the small public libraries. It is a system which they are already using and if there is somehow that this can become a point of entry into the system. One of the things, of course, that you're going to have to consider, and does anybody know, do all of our libraries in the state, public libraries at this point, have a telephone? I am betting that there are quite a few that do not and so we are at that basic a level. I do think it is something that these libraries are going to be interested in. They're going to want to hear about it. They're going to want to present it in a manageable and practical way that they can get a handle on as they work with it. In terms of standards, that also is going to have to be done very slowly because there are a great many libraries that still have hand written cards and there probably are some libraries out there that don't use catalog cards. I think that this is entirely possible.

So, there again, we have a long way to go, but the basic desire to provide these things for our patrons is there in all of these libraries. I am very sure that if, for instance, a schedule of standards that would have relevance and be practical and workable for a small public library, a very small public library, in terms

of retrospective conversion, obviously you are not going to hand the same standards manual to someone in a small public library that you are going to hand to University of Maine. That's the kind of thing, I think Susan referred to that earlier and that would be certainly tremendously important to public libraries. Again, I think that a possible point of entry might be the Interlibrary Loan system. One other question that I would like to raise and possibly Susan can address, which has been tossed around in shoptalk among librarians, is the possibility of a small number of libraries, three or four libraries in a contiguous area combining, for instance, their holdings in a union catalog. Whether this kind of thing would be feasible, if it would foul up down the road participation in a larger system or how could it be done in the beginning so that it would be compatible with another system. That kind of thing. And then one other point that I have written down here, and this is not a terribly well-organized presentation, one other note, the catalog card system from the state library is an enormous help to us. It's coming along a little faster, this is the problem that so many people refer to, but it is basically, a tremendous help to us and if it's a help to us I think it's got to be a help to a lot of other people. The more we can do with that and at least from this point on, getting those cards into the catalogs around the state, the better off we will all be. Thank you.

Susan Epstein:

I think I have three questions in what was said. The comment about standards coming slowly and some libraries have no catalog cards at all, the question of do you have telephones. I will admit that I received copies recently of the district studies being done of libraries for the both the Northeastern and the Central Districts and I don't remember which one of the surveys asked something that surprised me. It wasn't the question about telephones in every library because that is the number one priority in the state automation plan for the state of Kentucky, to put a telephone in every library. So, that wasn't a very big surprise. I've worked with the state of Hawaii where we've got a lot of small libraries without telephones. I think the question on indoor plumbing sort of threw me, but you know, first things first.

The question on the standards and where do we come and what if we don't have any catalog cards at all. I think Martha's point is very well taken that one of the things that I see happening when I talk about tiers of participation is it will be many years, even if we had the money, before we're able to do everything we want to do because everything takes time to accomplish. One of the things that I would see for smaller libraries is the bouncing off of a database that is built from the collections of the larger libraries in the state who will be facing this problem from a much different perspective. Although we have many unique

titles in small libraries. I suspect that actually we have a very high overlap when we get down into those libraries. If we have a high overlap, what we will be able to do is to add the holdings of a small library to a bibliographic record that was created by a larger library, so that the standards issue doesn't become an issue unless that library is unwilling to accept the cataloging that is done by the larger library.

We're always moving up to the largest cataloging source of all that we are currently using in the state of Maine, which is OCLC, with the records coming from the Library of Congress MARC Division and other contributed cataloging. One piece of information that we're working on right now that you may not be aware of, those of you who are getting cards through Card Service we may be able to turn your holdings into machine-readable records today. Or as soon as we get ready to go on with what we're doing, because of the way we're using the Card Service. It's something we have to explore a little further. You can't see it when you look at an OCLC screen, but it is there on the tapes, we believe, exactly which libraries are holding, because of the codes that are used. It's the difference between a three letter code, which is what you see on the screen, and the four letter code, which is what we're cataloging on. It needs some more investigation, but that's what it looks like.

One of the interesting things that I've discovered: when OCLC began its Interlibrary Loan module, suddenly we discovered that a lot of medium to small libraries were becoming net lenders. The more work I do in that area the more I'm convinced that it's partially the fact that they have some unique titles, but more importantly, they have the same titles that are held by many larger libraries, but they're more available. In a larger library, in the state of California, everybody used to willy-nilly send requests off to University of California, Berkeley. Berkeley's loans faculty members books for a year. (Laughter) Yes, they think they've loaned books to faculty. The faculty think they've been given the books and they're hidden away in faculty offices. Also the circulation in some of the more esoteric subjects is higher than it might be in another library, so the question is not do those libraries have unique titles, but can we broaden the number of known copies that we can locate and that's what's going to change some of our borrowing patterns as we're able to say, all right, this may be my first choice, but their copies are all checked out.

Now, in the second choice library there is a copy on the shelf that I may be able to obtain. I think that may be one of the things, that what we're finding is it's evening out a number of the loaning patterns across the country. And it's about time, too, because I served on the National ALA Interlibrary Loan Committee at the time that we were revising the Interlibrary Loan Committee regulations. I was the token public librarian and I was also the token automation person on the committee and it was

very interesting because everybody else on the committee was a major net lender and the regulations and rules that they were trying to put in were really for them. I know one meeting I sat there and I broke down in laughter and they said, "No, but we can set a regulation, the current regulation says that you don't interlibrary loan books for undergraduates" and I said, "I'm in public library. I can't do that. I can't ask people that." And they said, "You can't?" I said, "No they're tax payers too." "Do you mean that if my undergraduate walked across the street to interlibrary loan a book from you, they could do that after we've turned them down." I said, "What do you think is happening everyday?" You'll notice that the new regulations do not provide for any restrictions on undergraduate interlibrary loan on a national level.

[Faint voice from audience]

Susan Epstein:

Um, there's another question. . . Clusters. Yes, it is possible for libraries to cluster, but I frankly wouldn't recommend getting into it now, until we know more about what's going to happen on a statewide basis. I earlier mentioned the fact that we may be able to work some financially advantageous situations if we are able to do something on a statewide basis and it may be well to your advantage to wait. I think you will certainly know in less than a year whether this thing has any hope of going anywhere or not and whether clustering would be the thing to do. We will be discussing the standards in the report that will allow, if you do have to go to small clusters, that will allow those clusters to eventually communicate with other clusters. But, it will possibly be more expensive in the long run and a little more difficult as far as your learning how to communicate with another system. But, it is certainly something that is being done all over the country. Clusters of a few small libraries, I think I would cluster even more than that. I think that, now perhaps not in some of the southern area where we have a lot more libraries, but as we get further towards the northern part of the state, I'd bring anybody who's in any reasonable geographic area in, simply because that's your natural area for sharing resources.

But, again, I don't think I would recommend that anybody go out and start acquiring anything today. On the other hand, if somebody gave you a bequest that had to be spent by the first of November, come talk to me and we'll figure out a way, I'd hate to see that money go to waste, but if you're not in a situation like that, I really would recommend waiting. I think we're going to try to come up with some things that are going to deal with it on a more statewide basis.

[Faint voice from audience]

Susan Epstein:

I think I've already talked about the three things she asked me. I really combined the answers to two questions in one. Thank you, I liked your points.

Gary Nichols:

The card cataloging is an interesting program, of course, in terms of the implications for medium, small, all types of libraries here in Maine. We started out with sixty libraries participating in the Card Service. I urge the public libraries who may be here who are not participating, to please do so. Exactly because of the benefits we are talking about in terms of automation in the future. We have ninety participating now. I'm glad to hear that, the services are speeding up. Part of the problem was the transition from it being done in New Hampshire to the state library and being done in the OCLC format. And also, as a result of the liberalizing of the restrictions for using the program, we opened ourselves up for a lot more work than we had anticipated. A lot more, so it's to the point that we have to make a special request in the next legislative session for supplemental funding, because the program costs went from \$20,000 to almost \$50,000 in a year-and-a-half's time. And I've just found out from talking to Bonnie Collins that July and August has seen a 30% expenditure in the program, so I said, "Geez, we've got a problem, let's review what's going on here." So, we went down the list and we've looked at orders for cards and requests for forms to order the cards. The first one I came across was Patton for 6,000 order forms. Patton couldn't have bought 6,000 books in the last 20 years. East Limerick was in the same case and we called some of these to find out what they're doing. We found out what should have been obvious to us which was that this is such a great bargain, they're recataloging their collection. So, don't seize this as an opportunity to catalog your entire collection, because we know that's going to bankrupt us and we're sending out a notice very soon alerting libraries that we feel that that at this time it is an inappropriate use, although maybe sometime in the future, sure, to get your collection in machine-readable form, but not now. It is important for us and we hope that all of you at this point, are certainly participating. The question about the facilities, the restroom, that really is an interesting one, quite relevant to us. I know one library in this state has a Skippy peanut butter jar and that's about it. So, you would be surprised how libraries score in that area. Now, thank you, Petey, for _____ your comment. I would like to hear from some of the other small or medium-sized libraries who I know are represented here.

Jill Hipsher:

I'm Jill Hipsher from Brunswick High School. Before you get too far away, Gary, from talking about the card catalog service, I'd like to mention one thing that was talked about at the Spring Conference of MEMA last year, last school year. School librarians are becoming more aware that this service is available for public libraries and we'd like to get in on it, too. Good, I just wanted to bring that up because I think that would be something that would be really helpful for us.

Gary Nichols:

Just let me make a quick comment on that. We do, in fact in two parts, but we have in a part we call the New and Expanded Services Program, the Part II phase of our budget. If that doesn't go, we also have prepared legislation to include that service for school libraries. If we have to go to a legislator to submit a special bill, we will. But, that's part of our major legislative effort to include schools as well as public libraries.

Charlie Hilt:

I think that sometimes if you have been a public school librarian, you don't think there are other libraries and there are other libraries and I'm working right now after having taught for some years, 47 years, I went back to work in a hospital library. I'm Charlie Hilt from Machias. I work at the little hospital down there. We have, I think, the hospital librarians have a good state organization. I would not call it good, I would call it excellent and we're excellent librarians. You all probably know Melda Page and you know Robin and let's see, I see Debbie Aviril from Bangor Mental Health System. I don't know who else I see from hospitals, but we have a consortium down in the eastern part of the state which takes in Hancock, Washington, and Penobscot counties, one hospital in Sommerset, one hospital in Waldo County and of those, eleven are very small. You'd be amazed when I checked through, we had a consortium meeting a week ago Friday and they asked me to go and speak up, but they don't know me. I'll always speak if I get a chance. By the way, I just thought a minute ago, they mentioned a convenience out back that was cold, I saw on MPBM the other night a program on castles and here is one of those dear old gentlemen going to the _____ privy in the castle and I taught for five or six years in these one room school houses with nine grades and the little stove in the middle of the room and the outhouses out back. I know all about that, so you see

this story on castles in 1600's is no different than the 1930's. Just quickly, none of us has anything besides the microfiche in two of these places as of next week. We do have telephones, these small hospitals. The funny thing is that in the first hospital on my list, there's a librarian there one day a week. She's a volunteer. Second hospital, two days a week. Third hospital, two and a half days. The next hospital, which is a bigger one, three hours a week. Another one, medical records and library if you get time to do anything. Another one is working the administrative office and ?Millinauka? we have a person there four full days a week. Isn't that wonderful for a hospital library, medical library of course, not the library for patients.

(Tape turned)

Gary Nichols:

...can't improve on that.

Doris Chapman:

I'm Doris Chapman and I'm at a high school library in Portland and I have two or three questions. One is where do school librarians fit into the plan? Just to tell you what we're doing now, we've finally gotten TRS 80 computer and I was on cloud nine for quite a while after this finally came in. We're using it for two things presently. I'm just starting with Richard Riley's catalog program. I'm delighted to know that we may be having cards from the state and I am using ISBN numbers even though I hate to type numbers because I never learned to do it well, but I'm doing it. When I go back home, I'm going to incorporate the LC numbers as you suggested. We were listening yesterday. I'm also using a circulation system that's a variable database kind of thing and as an honors project one of our very bright kids, after a lot of consultation so he could find out what I wanted developed in this program and it's working very well. So that's where we are with computers, but I'm excited about this whole business of networking and I'm wondering will we have access to the tapes from the database, I mean, from the larger libraries in school libraries. Is that the way we want to go? Is that a practical kind of thing? Many of our school libraries don't have telephones either. You get a phone call and you've got to go way to the principal's office to ask, I'm fortunate, I have one, but many don't. I also have a question. If we do go into this and are able to use the database, what kind of support is going to come from the state, if any, to pay for this? Obviously it's expensive and people on OCLC and NELINET have to pay. If it comes down to the school system paying for it, we're going to need some good advocacy besides the school librarians telling the administration that this is a good idea. What kind of back up is going to be available?

Another thing that I'm wondering, in the talking about support, financial support for doing retrospective conversion, are we going to have some state funding to help us do this? As most school librarians, I'm the reference librarian and the acquisitions librarian and the technical service department, you know, the whole show, and I do have an assistant who is with me most of the day although she does have to take care of a study hall one period a day and, you know, that's not unique. I'm not telling school librarians anything you don't know, or the rest of you who've had anything to do with schools. Portland is a good school system, but these are the hard facts of the way tax dollars are needed today. So these are some of the things I'm thinking about. We do have in our catalog, all typed catalog cards, but I have some handwritten shelflist cards and we've had some very good librarians over the years who just haven't had the

time to do anything about that. We've got a mishmash of things in that catalog, complete cataloging, author/title and the call number and various kinds of Cutter numbers, so it's a wide variety as it is I'm sure in many small public libraries and many school libraries. Who takes care of this in the elementary schools when there aren't very many elementary school librarians in the state of Maine? I'm talking about certified personnel, now. This is another concern that I think we have to address. I guess what I'm asking is how much can we look to the state for some of these things.

Now, another question that I've been asked to ask for somebody else. _____ had a concern yesterday which is a real concern for all of us, and that is what kinds of standards for AV materials. In school libraries as in many other libraries, particularly school libraries, there's a lot of AV software. ISBN's don't exist for that stuff. What kinds of standards either will there be, is this question being addressed and what do we do now because I'm faced with a lot of cataloging to do on AV material and I'd like to do it so that somebody ten years down the road doesn't have to do it all over again after me. Thank you

Susan Epstein:

I have said privately to some of you and I don't know whether I've said it to the large group, that any time you work on a project like this, there are really three main issues. Technological, political, and financial. And the technological one is the easy one. The financial and the political issues rank one, two and it varies from state to state which one is one and which is two, but it certainly one of the problems. I'm going to defer how much the state is going to support to Gary. No fool, I. The question of where does the high school library fit in is something, I'm very aware of. As it happens, my next door neighbor is a high school librarian, actually a junior high librarian who has no clerical help at all, and half of her students don't speak English, so it makes it even more interesting. What do we do with libraries like that? Again, to go back to something I said earlier, that I certainly see a very strong role for the high school librarian and the high school library in any kind of statewide plan. As a matter of fact, one of my professional dreams has to do with this school/public library synergy that I think is possible. The school library has resources that fit the needs of the school curriculum and staff which are trained to work with school age children, ranging from elementary to high school. The public library is open more hours, but has a staff that is not directly trained to work with that age group and is not as familiar with the curriculum demands or the demands of any individual teacher as would be the school librarian.

One of the things that I see happening, as a matter of fact I'm working in one particular community where we're talking about doing this, is putting terminals of the online catalog from the public library into the schools. The schools will not be users of the online system in the way we're talking about here, where they'll do their own circulation and their own catalog on that. What they'll really have is a terminal of the public library catalog. The school librarians are very excited about the possibilities of working with a student in the school library during school time with their knowledge of the assignments to help them pick bibliographic materials, to pick the right things that they need so that when those students go to the public library that afternoon or evening, the public librarian who's got no idea what the assignment, nothing about what the teacher wants, is suddenly being inundated with thirty students and also has the general public to deal with, is able to primarily direct the students to where the materials are located, but someone else has already helped them select. That happens to be something that I feel very closely to ever since my first week as a reference librarian when I did, indeed, get thirty students who all had this nebulous assignment that turned out to have come from the teacher's ten year old edition of Bartlett's Quotations, and I didn't know that. But, I've been working on that, and I think I've got a community that's very close to doing that. What I see happening is something like that of getting books back and forth from public and school and academic libraries using the existing ILL cooperation, but more information because it will be better online.

We were talking in the Committee meeting on Monday, that the work that is done by the school librarian may vary considerably from area of the state to area of the state, depending on what other kinds of library resources there might be in that area. In a more metropolitan area such as Portland, you do have the public libraries, you may not be doing the same level of ILL. It may be more referral, whereas in some of the more remote communities, the school may be the only source those students have for materials at all and if they're not going to get it through the school with interlibrary loan, they're not going to get it. So I certainly see a role there, but I see that more as a tier and perhaps the way to deal with the problems of retrospective conversion and the handwritten catalog cards, the handwritten shelflist is again, to tag on to records that are created by another library which has a greater vested interest in converting a lot of unique titles so that they can use an online catalog sooner, and again, so that they can provide greater services. Lest you think that your problems with various types of cataloging and different types of Cutters and things are unique, that is certainly not something that is unique to school libraries. I think the worst situation is when you find very old academic libraries where we have the most incredible cataloging schemes that have been used over the years. It is not for nothing that most of them have long sheets of paper at the door

that explain where you find things depending on these arcane numbers and letters and colors and symbols that are written on the catalog card, so that is not a school library problem. It happens in any library that has been founded before 1980.

As far as standards for AV materials. The problem is that at the moment we do not have as much cataloging in machine-readable form of AV materials as we do of monographic materials, but that number is growing. As far as standards are concerned, we do have standards. There are MAPC formats, there are seven MARC formats and I might even try to name them, although I'll probably forget at least two, that can be used. We have the MARC standard, called MARC Books which is monographic materials. We have serials material. We have films. We have phonodisks. We have maps, manuscripts, scores and a brand new one coming in for archival materials. There is another brand new one coming in for machine-readable databases and I think what's happening in the cases of some of the other ones is we have been using either the films or the phonodisk format for materials which are very similar such as video cassettes and audio cassettes, that fit into those. In the AACR II manual, there are cataloging instructions if you can wade through them, the infamous Chapter Six, that you can use for cataloging. So there are already standards. I think the real problem in this case is finding cataloging done in machine-readable form already for AV materials. It is quite true that the schools have the majority of the titles.

One of the fortunate things is that as we see the growth of community college media centers joining things such as OCLC, we're seeing more of those materials. The Library of Congress is beginning to catalog more of those materials for distribution and we are seeing a number of situations such as what is happening in Maine, where we're using consortia for cataloging through OCLC. We're seeing some very large school districts join OCLC as individual members. And as that happens, we're going to get more and more AV materials online on machine-readable cataloging. Now, one thing that I do tell people, if you're facing a major retrospective conversion task and have to start somewhere, don't start with your AV materials, because you don't know exactly which year you're going to be using this and your AV materials are your most expendable. They're the ones that wear out fastest. They're discarded soonest as opposed to monographic material. So, save them later and the longer you wait, frankly, the more machine-readable records we're going to have.

Doris Chapman?:

Can I just ask one more thing? I think that I'm aware of what you're talking about with the standards and I'm sure Jean is, but I guess the concern was what is analogous to ISBN number or the LC number that you feel is absolutely essential and must we use

all the information available to us if we find something that's cataloged on MARC tape, for example, or do we leave out what we don't think we need?

Susan Epstein:

O.K. Yes, there are some numbers that are analogous. There are record numbers that can be used that come right off of the media. We're coming very close to a new software standard number that will be usable for computer software and some of the other things that are coming. Frankly, this a real gray area in this respect. If you are just cataloging from the material itself, you're not using a machine-readable source at all, as long as you keep the number, now you don't have to use everything that is there, because that is unlikely that that will become our ultimate cataloging source. Our ultimate cataloging source will probably not be your catalog card. It will probably be one of the national databases and what we need to do is be able to pull your holding from that national database of some sort and that's where the record numbers come in.

Doris Chapman:

So we really don't need to be too concerned about this now.

Susan Epstein:

Well, I'll give you.....

Doris Chapman: (All off mike, difficult to understand)

As far as the OCLC, I mean as far _____
_____ as the _____

Susan Epstein:

Yes, I think one of the things that really gets involved is the whole question, particularly in phonodisks and things like that is this whole question of uniform titles and some really intricate cataloging problems that are very difficult to deal with and as I say, I do advocate standards, but there are some real problems there. Yes.

Audience (Off mike):

Speaking of _____ catalog _____
in an academic library, I _____ that the

films and films _____ is currently now not indexed by OCLC _____ there will be enough pressure applied by groups like _____ library association and other people _____ have that _____ back for label like RCA _____

Susan Epstein:

RCA's 4278-7 whatever. That is the record number,

(Audience again) _____

Susan Epstein:

Yes, something like that and get it in and again, you aren't going to be working with machine-readable cataloging, but it is the 028 field and get that on your card so we can later match it. You're right, I think we're going to get it later indexed. Yes, Nancy?

Nancy _____:

I haven't had a big budget for Audio Visual materials, but everything that I've ordered so far has come in cataloged and I haven't had to pay for it. The filmstrips and cassettes that I've ordered have all come in with cards there. I may have to put a subject heading on or something like that, but cards come for me. I haven't had to catalog one AV item this year or last year. I get my reference books catalog, but I wasn't ordering anything cost us in cataloging AV comes processed. Everything from National Geographics.....

Susan Epstein:

A number of AV things are coming processed and frankly, this is the reason why. It's because it is so difficult. Some of the suppliers, particularly of schools or for public libraries. It depends on your sources. There is a very large phonodisk/cassette source called Professional Media Services that provides full catalog cards to MARC standards who also can be machine-readable copies of it, when you buy most of their things. They aren't technically free, although it doesn't change your price any whether you get it with or without cataloging. It's all built into the price and there is some of that. Keep the information that uniquely identifies that piece of AV material and unfortunately sometimes, particularly when you start talking

about things such as filmstrips, that number may not be on the physical container or the physical piece itself, it's only in the literature that came with it or the literature from which you bought it. In some cases, it is a real nightmare. But, do the best you can. Maybe we'll get rid of that piece before we have to go online.

Audience (off mike):

....real problem, you can have an AV workshop here _____
_____ for the school and public librarians and we can spend
the day working with MARC formats for AV materials and _____
_____ it wouldn't be a problem after that.

Susan Epstein:

It is true, though, when you do retrospective conversion, it is true, when I work with libraries, I have more than once said when they get down to this stack of things which they can't find on the OCLC database, they don't have any sources for them, they aren't locally significant and they say, "Now, what do we do with them?" I say, "Now you throw those away."

Gary Nichols:

As far as the political/administrative aspect of that question with school libraries and their inclusion in an automated system, I think that in the state of Maine, we have much going for ourselves in that regard. I bring to you and the school librarians my experience as a school librarian, which is two years. Plainfield High School library, Plainfield, New Jersey with 2,900 students and myself as the librarian and no support staff and that was it. It was a real difficult position to be in, especially at the time that I was there. There was a great deal of political and racial turmoil. It was like working in a MASH unit. It was awful. I survived two years, and must have done something right, because when I left, they built a brand new library, oh I know why they built a brand new high school. The kids tore it down. They built a brand new high school and a huge media center and hired four professional staff people. Maybe that was to straighten out my mess. I don't know, but I had the chance to be in on the planning and make some of those provisions.

Here in Maine too, one of the definite assets we have is that the State Library's part of the Department of Education and Cultural Services and that's one of our plusses. Although many of you may not believe that to be the case, it's a lot easier for us to make our case in terms of what the political context being a part of the educational establishment, especially when it comes to school

libraries. Now, I will grant that the special session that we've just had in which 96 million dollars was appropriated for the improvement of schools and the state of Maine and 19 new staff positions, not a penny of that money is flowing to the State Library. Not one of those 19 positions will come to the State Library. There is at least in the initial report, there had been little reference to the improvement of school libraries. However, there have been some basic amendments in these reports. There have been some significant amendments in the legislation itself that we're currently combing through now. It has a great deal to do with rules-making when it comes to implementing and distributing the package of legislation that was just passed in a special session and how that money is to be spent at the local level, and there is language in there in terms of the rules making for standards and requirements of adequacy for schools, for school libraries, for media resource centers at the local level. So, even though we don't have dollars, we may have impact on how those dollars are being spent in a more significant way at the local level and I think that is very important to us.

We also, I think through the effort of the State Library and those who were supporting the State Library at the time, were developing the regional library system legislation back in 1973, all those far-sighted people made it a definite goal and requirement that we include school libraries from the very beginning in the regional library services program and believe me, as small as that may seem now, because that is eleven years ago, it was a very significant development at the time because there was probably only two or three other state regional library systems in the country that included school libraries in their efforts. Right from the very beginning, we included school libraries and they do know how to use resources and they do know how to use them well. Fifty percent of what we do in reference and interlibrary loan activity was with school libraries. I don't know how that carries in the other ARRC centers in Bangor and Portland, but a rather significant part of our business is in the support of the effort that school libraries are making in terms of getting resources to their students, but you know, there is still a lot of work to be done, of course. We will definitely work in behalf of school library interest to include them in automated activities.

You have a commissioner, Bob Boose, who is an automation and computer advocate and believe me, he's very sensitive to this issue and he's deeply interested in making sure that school libraries are part of our whole effort in this regard. I think that we'll have his support in the next legislative session and I think that you'll have his support in the future as you will have mine and it's a matter of where do we proceed, how do we do this most effectively which is part of our concern in having Susan with us. I don't know if that answers it all, maybe we better move from that unless you have a question and go on to somebody else.

Louise Hinkley:

My name is Louise Hinkley and I am director of Handicapped Services at the State Library and in that position I coordinate Talking Books program statewide and I am in charge of the Large Print Services. Talking Books in Maine are provided through the State Library and the public libraries in Portland, Lewiston, Waterville, Bangor and Holton. However, the Talking Books program is part of a national program that's coordinated by the National Library Service for the Blind and Physically Handicapped, a division of the Library of Congress.

I sent a brief memo to Susan, but for the record, I'd like to just mention the automation activities of NLS. They're developing two systems. One is a circulation and reader registration automated system for Talking Books program which will work on a local area network of microcomputers where two or more micros will be linked together. They've developed this program on IBM PC's. I could also use this program not only for Talking Books but also for Large Print circulation. The other system is called NLSNET and it will allow any network library that has this for Talking Books to produce statistics that are required by the Library of Congress and to do a lot of administrative tasks such as weeding the collection, ordering books from the Library of Congress, keeping our mailing list up to date and that kind of thing. The second system is one which the Library of Congress is going to permanently loan each regional library, generally there's one regional library in each state, with a microcomputer for their circulation system. Each library who wants to use that system will need to buy their own hardware, but the actual software will be provided by the Library of Congress. So, NLS is going ahead with this, the circulation system is now being tested at two regional libraries.

So, the Talking Books program at the State Library's going to get an IBM PC in another couple of years, hopefully only a year. We won't have any choice about whether we get an IBM or TRS 80 or something else, because it's coming to us from NLS. I just wanted to mention this in the hope that these activities and the fact that Library Services to the Handicapped in Maine are already part of a national network, these will be taken into account in the study and can hopefully fit into a proposed statewide plan.

Gary Nichols:

I did see a hand way in the back. While you are coming up, I wanted to mention something about school libraries again, that I failed to do and is certainly significant. It is that, as you know, we have a media team at the State Library, Dot I see here and Jack was here a little while ago and Walt and now the

Information Exchange Program, so we have a very strong unit and we have had, again, since 1973 when we felt it was most important when the department, when the State Library reorganized to pull together the resources that we're dealing with in the state, in terms of the consulting with libraries, to pull those together with public libraries, so we do have a very strong effort at the State Library that has concerned the school libraries and hardly let an issue go by, believe me, Walt doesn't and Jack doesn't where we're not talking about how it fits in library goals, not just school library goals and objectives, too.

Carl Ventrone:

Carl Ventrone from CMVTI. I suppose you could call our library both small and special. I have several recommendations, but I think I can give a little bit different perspective than what I've heard today. You might be interested. The recommendations I would like to make to Susan, simply because of past experience. I came to Maine from a very highly centralized system with an operating network and so forth, of course Maine has had a decentralized. Seeing how both work, I would strongly recommend, I know, I hope your report doesn't gather dust, but I strongly recommend a strong, centralized system, as far as I'm concerned, that's the only one that works. As far as technologically capable, I highly recommend a facsimile capability and a strong suggestion looking at broad band video, particularly in reference to disk capability in the future. Last and perhaps directed to Gary more than to Susan, I think if anything is going to move automation in the state of Maine, the political and economic problems must be solved first.

A little bit of my own experience, everybody's saying, "Oh my heavens, we have to do this," I arrived in Maine ten years ago and the first thing I thought was prepare the library for automation. I'm ready to go. I could automate within 90 days if I had the equipment. Even though I'm ready to go and I have flow charts on top of my flow charts, I don't have to worry about a John, I even have that flow charted. However, I'm no closer to automation now than I am ten years ago. I have no expectation for automation. Resource sharing, it's interesting to hear Mr. Spears speak of how true literature from a library that's no more than six miles, less than that, three miles from mine. I have the largest applied technology section, only people in the industry knows about it, nobody else does, the largest applied technology collection in central Maine. I have no way to share it with anybody else. Without the economic and political situation solved that will allow me to share, it's no use except to myself and to some very special students. I don't see any solution to that until the other political and economic problems are solved.

Gary Nichols:

I don't know if I have any answers except that I'm wondering, just curious, about what's preventing you from sharing those resources now in a political way. We're all a part of one unit,

Carl Ventrone (Off mike, from audience):

?Capability and everything else pertainable. I used to share with people _____ public library, but over the years the staff's gotten less and less _____ I'm the librarian and have to _____ and one assistant. _____ .??????????

Gary Nichols:

So it's an economic issue.

Carl Ventrone (off mike):

It's also a political issue because the _____ State system is quite able _____

Gary Nichols:

I think we can have one more comment. Doris, why don't I hold because I know somebody way in the back has been looking to say something.

Audience (Off mike, talking in the background):

?????????? I'm from a large public library where somewhere _____ and a very _____ and _____ come to say that among the problems I seem to have _____ and many of my questions have _____ standards and _____ ready to go and wanting to do everything _____ until we found out that it is not possible on _____ . The larger library, with an _____ position _____ to do all these wonderful things, but I do want to say that we're very interested in becoming part of a larger interactive network. We don't want to feel left out. And I think that's probably all that I can say. _____ .??????????????? (Sorry!)

Gary Nichols:

Thank you. Doris, you had something to say.

Doris:

One thing that I want to put on record. O.K. very short. I want it on the record that we school librarians do, indeed, appreciate the things that have come out of the Media Services. I have a great debt of gratitude. Dot was a tremendous help, for example, when we were planning the new library and that's only one of the services, so I want you to know that I really do appreciate that.

Gary Nichols:

Anybody else want to say something? I think that this is a good point to break for lunch and maybe come back together at a quarter after one. Lunch is right up here, please help yourself.

Break

Gary Nichols:

People have been asking, "When do we get a transcript and how do we get a copy of what's transpired here and a copy of the final study?" I can assure you that you will when the transcript of today's session and yesterday and there's much mail that Susan has been receiving that will be incorporated into that too. I wanted to remind you that Susan will be back in October, the week of October 15th. A couple of people said they feel that certain groups may not be adequately represented here today. I can only say that for those that feel that way or for other constituencies we'll have another opportunity in October that you can meet in a more direct way with Susan. You just have to let us know so that we can arrange that. It appears, for example, that there may be a lack of the smallest public library participation in this forum, somewhat, but through the Small Public Libraries Association, for example, Susan will be more than willing to meet with representatives of that group to have an exchange with them about their feelings and automation. Or, individually, again, if we can work something out, we're more than willing to do that, so that we can pick up on that once again in October. Yes?

Off mike, from audience:

Is the process set up so that we get a preliminary finding at one point or do we _____?

Gary Nichols:

Susan, maybe you can help us out in terms of when you think the transcript would be available. The actual study itself, we have promised to have done by the first of January, so we know we'll have something in writing then, then we'll pick up on the preliminary findings.

Susan Epstein:

Well, this is all theoretical. Theoretically, I hope to have the transcript ready in approximately a month. My problem, frankly, revolves around my travel schedule. As you may have gathered, if you're not very familiar with the terminology, the person who is going to transcribe all of these tapes, we're going to have a lot of gaps and things, they absolutely have to be edited by myself and with my travel schedule, I'm going to pick up as many pieces of paper every time I hit the West Coast and edit them and get them back to the transcriber. I would love to say that they will definitely be here by something like the fifteenth of October. I doubt that that will happen. I think that it will be closer to the end of October. In November, I will be submitting a report on the current state of library automation in Maine and that actually will have some of the testimony that you are going to submit attached to it as addendum. The draft of the final report will be submitted in early December. I intend to come back to meet with the Automation Committee in early December and then work from that so the final draft will be finished by the first of January.

There's another thing that I'm going to be doing for the State of Maine which doesn't appear in this program of reports and trips actually to Maine. With any luck next week, but more likely the week after, I will send out to turnkey vendors across the country, some information about the library automation situation in Maine and about some of the things that I would like to see happening here and solicit their views on what they can currently provide and some indication of what they might be able to provide in the future. The difficulty with talking about future is, of course, that's very proprietary to the vendor and much of it is something that really can't be put down on a piece of paper, but is much better coming out in discussion.

In early November, I will be making a trip on behalf of Maine State Library to visit with a minimum of three and more likely five vendors who, from their responses to my written request next week or the week after, indicate the most imaginative ideas of some of the things we might talk about. I will be trying to come up with some things that the vendors see happening in the next couple of years that may make some of our situations, some of our

problems here in Maine a little bit easier to solve. I want to make one little comment, somebody talked to me during lunch, I keep talking about commercial vendors and the comment was am I very partial to them. Yes I am because there are a limited number of people who understand both the data processing and the library end of things. They are scarce and they are expensive. Most of them are very happy working wherever it is they're working. They work in places such as OCLC and RLIN, at the University of California's Division of Library Automation, they work at the Syracuse University. They work in some of the places where you're reading about some very exciting library automation going on now. My feeling on trying to work with one of the other systems, or build something yourself is it requires a staff of experts. Those experts are scarce and I feel in my business that it is not my position to recommend that you get involved in something like that. Again, in a state where frankly salaries tend to be a little low, I think you're going to find that these people are completely priced out of the market.

The people such as Ed Brownrigg or Cliff Lynch from the University of California who can sit down and design a MELVYL system. Cliff is absolutely a computer genius. I have no idea what the University of California is currently paying him. It's not enough. He could probably command a salary of \$80,000 to \$100,000 if he went into the private sector. Not in the library private sector, but in just the data processing private sector. And that's the kind of person you really need if you're going to do it yourself. I don't think the people are there, so I think that the turnkey vendors have done a lot for libraries and that's one reason I keep going back to talking about turnkey vendors. It is not that I have any great feelings for any one of the vendors. Each one of them has their vulnerabilities, to put it mildly. I have been in great arguments with almost everyone of them at some time or other in my career. At various times they have accused me of being biased against turnkey vendors, but I think it is the answer for cost-affordable library automation today.

Side Two of Tape

Gary Nichols:

...in time to have something actually submitted to the Legislature in January. We may be able to buy off a little time in January even though you're supposed to have legislation submitted by the first week, we may be able to delay it 'til the last week, perhaps. But, after that, if we don't make it then, then we have to think of some way that we can conceive of this as an emergency piece of legislation in the special session, which I doubt that we can get it accepted as, and then you're talking about two years from now at the next regular biennium. So, we do have some pretty awesome time constraints to work with. We'll

just have to the best job with that as we possibly can. By getting further reactions and comments and hopefully incorporate it in time for the January session. Now, I'd like to at this point, progress with the next series of comments that you had. I believe that somebody had their hand up just before we broke for lunch, back in the back. Was it you Barbara? Would you want to say something?

Barbara Shelton:

I'm Barbara Shelton from the Wiscasset Public Library and I think when we're dealing with small public libraries, one of the first things that we have to remember is that most librarians of small public libraries, it's a labor of love. They're definitely underpaid and under-appreciated. I consider myself fortunate that I'm not in that situation, but whenever anything like computers comes up, you have three problems to face; financial, or course, political, and trustees. I happen to be fortunate in that I think I do have a good board of trustees to work with, they're fairly supportive. However, when it comes to computers, I think the first thing they're going to say is, "Every time you have an idea, or the state has an idea that they think would be nice, it costs us money." And inevitably, it's going to. In many of these small towns, there's no money to do it with. I come from Wiscasset which of course, is considered a very wealthy town and immediately when I say Wiscasset Public Library, people say, "Oh, well." But, that's not the fact because the town contributes less than a third of the cost of running our library and the rest comes from our endowment, so we do have a problem, too.

I think we have a good relationship with the town. When I wanted an addition, they cooperated to the extent to \$80,000. In this past year, we've needed extensive repairs to the old building and I was able to get \$20,000. This has come over a series of years, because when I came to the town they were contributing \$400. So, we've done pretty well along the line. I think I can go to them and get a computer. Probably the software I need to start it with, but when I speak to my trustees, I can hear them now say that's all very well, but in the end it's going to cost us money. I can't tell them it isn't because if we want to make that computer operative, we're going to have to do it. I think it's one thing that all the small libraries do have to face, and I don't know where the support is coming from. It can't all come from the state, because everybody's taxed along the line, but it is a thing to consider with small public libraries, definitely.

Gary Nichols:

How true that comment is. I think with many small libraries it's going to be a matter of priority in terms of choice and whether

to invest in, of course, automation or in a practical thing like books. With the inadequacy of book budgets throughout the state of Maine, it's going to be rather difficult if you pose that question to most small libraries. I think you can second guess what their choices are going to be. You know, that's part of our problem, too. It will be part of the problem when we're dealing with the Legislature in terms of asking them for additional resources. Going to local public libraries, they're going to asking the same kinds of questions, looking at the same kind of issues. We have to be prepared for them. Any other small or medium sized libraries for now? Yes, please.

Dean Lyons:

My name is Dean Lyons. I don't really qualify under that heading because my concern that I haven't heard expressed here is for the "no libraries." I'm so heartened to hear this expression of concern for the small libraries and I have to tell you first of all that I used to be a small town public librarian. In that position, I was not too concerned about the telephone because the library was just supposed to be open two hours a week, so there wasn't much time to use the telephone and it would have been a large percentage of our budget if we paid for a telephone. I was concerned about the other issue of the bathroom and I thought I had made tremendous progress when I got someone to donate a port-a-potty, but then I got thinking about it. I didn't mind shoveling my way to the door to unlock the library and shoveling enough so that patrons could get in and sweeping the floor and all the other tasks that were part of the small town librarian's job, but I decided that I didn't want to empty the port-a-potty so I didn't let anyone know it was there.

But, then I improved my situation tremendously, I thought. I became a school librarian for a district that includes five small towns plus Concord and Lexington which are disorganized territories in Maine. That's supposed to be a half-time position. That's half of my job, to be the librarian for those elementary school libraries.

Everything that I've heard expressed today, except for the retrospective business, is up-graded from what we're concerned about. We haven't even gotten to the point where we can be concerned about the difficulties that the small town librarians and the school librarians have expressed here. We've got a long way to go before we can get there. In the five small towns, let alone the disorganized territories, three of them have no - Oh, Jack don't take a picture now! - One of these towns does have a library that's open two hours a week. The other town library is open four hours, staffed by volunteers, so it's a different person each time you go. The other towns don't have any town library and I was thinking about when you talked about written comments coming in, maybe some of the comments from the places

that don't have any libraries at all would come in, but you really don't have anyone to address your letters to, telling them that this is going on, so I am really concerned that these rural areas get served. The bookmobile is a fond memory for many of these people and it was really a wrench for them when the bookmobile was discontinued. They haven't caught on to Books By Mail to a very great degree. I've been trying to put out the word that it is available, but it is very hard for me to get around to all these different towns anyway, and then to get people to grab the number and call in. I succeeded in getting one person to call in and then she was told that that was the wrong number to call for what she wanted, so she'll never call again. I really am concerned about the people in rural Maine. I think what's being done now is a wonderful intro into serving them. I've gotten your message about patience and these things have to come in time, but with so many needs expressed here, I just don't want you to lose sight of the needs that aren't even expressed yet.

Gary Nichols:

Thank you very much. I think one thing that we need to emphasize again. What you said about your written comments, please take the time to do that and we can get them into Susan's report. But, I think what we need to do again, too, is to make another effort. One more contact with all the public libraries, especially the smaller public libraries and all the school libraries, once again, very soon, to ask them if they haven't heard from us before, explain briefly what's going on, have them send written comments, with perhaps a deadline, so that they can be handled in an effective way. We can do that again. What we tried to do in this last mailing is even duplicate our mailing list so that people would get notices twice. Every time we approach this from so many different ways, there are a number of people who still didn't get notices about the meeting so, we'll look at that again and make one more effort to be as comprehensive in that as we can.

Off mike, from audience:

Can I make one suggestion? Previous mailings have been addressed to librarians. I have two trustees come to me and say, "Did they want me to come to this meeting or is it something I'm excluded from?" I said, "Come." I'm sure that was just an attempt to find a handle to hang this on, but they didn't. I think that if you broaden your terminology a little bit in your next notification.

Gary Nichols:

More effective if it's addressed to individuals rather than just to "Librarian"?

Off, mike, from audience:

Well, don't use the term librarian if you want to involve anybody else. Maybe you didn't at that point, I don't know, but they had gotten the mailing and didn't quite understand how they related to it.

Gary Nichols:

Following through, then, on the needs of the smaller library community in Maine any more comments along that line? Yes.

Lee Price:

I'm Lee Price. I'm from the Ricker Library in Poland which is small and rural. I guess all the libraries have been tossing around the idea of computerizing the libraries, whether or not it was possible or feasible or something that they might dream about and along those lines I had taken a beginning computer programming course at CMVTI last spring and it turned out that the teacher of the course was a patron in my library. He has his own business consulting and he's very interested in our getting a computer in our library, so he's going to be an invaluable resource for me in preparing a proposal for my trustees and the selectmen of Poland to be convincing in letting them know that this is something that is really worthwhile. Someone else had mentioned feeling uncertain about being a spokesman for convincing the trustees of this sort of thing and I think that probably all of us have available someone in the community if we can find them who can give us a lot of help with coming up with a specific definite convincing proposal.

Also, this gentleman suggested to me that he and I might together write some programs for libraries and for small libraries. They would be for small libraries, because the larger libraries would probably need more memory than the microcomputers could provide, but we started in the course that I was taking and I haven't followed through on it yet, but if people are interested, if it works out, it would be a source of relatively inexpensive programs, like somebody talked about having a Commodore 64 and not having any programs for it. As it happens this fellow prefers Commodore 64's and so it's likely that if we wrote any programs, they would be for Commodore 64's. So, I don't know if people would be interested in this or not, but it's a possibility.

Karl Beiser, (off mike):

Let me say one thing. I think there are a number of, mostly in school libraries in Maine and also a couple of public libraries with Commodore 64's, less than one machine which is fairly prevalent, certainly affordable for which there is very little single-task, off-the-shelf, library-oriented software. It's putting together really the software that is a really time-consuming project, distributing and publicizing it, even more so. Improving it, working out the bugs that can pop up even more so, but it certainly is worth someone's while I think to try their hand at this, in a preliminary way, probably looking at more than just libraries in Maine. I can think of probably a dozen
_____ libraries _____
_____.

Gary Nichols:

Have you visited Poland yet? Debbie.

Debbie Baxter Averill:

Julie Tomlin asked me to say this. I'm Debbie Baxter Averill and I'm from Bangor Mental Health Institutes Health Sciences Media Center where the name is bigger than the library. I don't have a problem with patron acceptance, quite the opposite. I have people come in asking for searches when what they need is a medical dictionary. I don't have as much of a problem with help because I have Karl Beiser. I do have a problem with a central data processing office, part of which sits across the hall here, who thinks that ColecoVision is a computer application and they will turn that down. Our institute is currently putting in a Wang system and that seems to be the only material that we are allowed to buy. Regardless of whether it will help us.

I have a real fear of reinventing the wheel and I guess the major point that I want to make that I have not heard today is that if your report could somehow include a training aspect, a hands on training aspect that, forgive me Gary, has some money attached to it, because we are all interested. We all want to be there. Particularly those people in the small libraries, even if they are interested, cannot afford to take that training. There has been training offered, but they haven't been able to afford it. So, please if it could include some training capability.

Susan Epstein:

Do not be afraid that I'm going to try to reinvent the wheel. That happens to be one of the things that I preach very strongly. The use of commercial vendors is a very good example of not reinventing the wheel. Your problems with the data processing department are certainly not unique. They occur throughout the country at various levels of government and various types of institutions. There is a wide variety of mentality of data processing managers. We really have two schools of data processing managers right now. There's one that still believes that they can build empires, although the empire-building days for data processing shops ended about three years ago, but they don't know that yet. There's another group that has decided that they will move with the new technology and instead are very actively trying to manage large groups of microcomputers and individual applications and so on. The problem in that case is usually education. Perhaps what we can do in something such as this is if we actually have something else to offer on the statewide level, you might be able to get out from under your problem.

They're most likely using your Wang as a word processor and thinking of it in that setup. Wang makes an extremely good stand-alone word processor which is used in many businesses and is very good. They may also be looking at some other things, but when I hear somebody say, "We're going to put in a Wang." That's not what they're going to do? Karl will know what they're going to do. UPC's, oh my. There is virtually, and you may know better than I, I don't know of any library software currently written for Wang PC's. There is, as Karl said, MS-DOS which is at least, a step in the right direction, because that is a good standard, at least as close as we're getting to standards in the micro field right now. That may give you a little more flexibility because at least that means that you can put some other applications on. Frankly, if they're just getting the Wang now, you may not have to worry about it for a while, because they're going to be so busy trying to figure out what to do with what they've got, it will take them two years to settle down.

No name (off mike):

I have a question, and coming from a small library, I hear everything that everybody is saying. Can you paint a scenario of how a small library might benefit from state automation, even though you can't afford the hardware right now?

Susan Epstein:

The question, and I'm repeating for the mike, is to paint a scenario of how a small library might benefit from statewide

automation, even though they can't afford the hardware right now. Not only they can't afford the hardware, most likely, they probably also cannot afford to do either retrospective conversion or put any of their own data on the statewide system. But, I think the thing that's important is that right now you are probably sending interlibrary loan requests to one of three centers, somewhat blind, in that you don't know when you send the request whether or not they own the book, whether or not the book is available, and whether they might have other things available that might suit your patron. Your patrons at this point are not able to browse through the collection of one of the three reference centers, which is something, frankly, when I talk to people who live in very small towns, they miss a lot. If they're reading current reviews and can give you authors and titles or even a subject they want to read on, you can go off and find something for them, but if it's someone who says, "I just want some good things to read," you have a real problem of how you are going to satisfy this person. Fiction collections, particularly in small libraries, get read out and what is that person going to do. I think that we drop some of the impetus towards interlibrary loan because these people don't have a way to use, to see what is available elsewhere.

What I see happening is, without getting at all specific about names of libraries, is putting major libraries online with their databases online, either clustered or in the statewide system. Lots of different things, and I don't want to be pinned down for anything I say today. This is only a scenario of what might happen. Let's make the simplest one where we have this major database that is sitting here in Augusta, that has operating systems running from major public libraries and the larger academic libraries, all the campuses of the University of Maine, running in so that each library is using the online system as though it were their system. They're using it as an online catalog. They're using it to check in and out books. They're using it to place their own internal requests. That system not only tells you what is owned but what is actually available at each one of those libraries.

What a small library could do is one of two things. One is the very upscale of this, without being an active participant, they could acquire a "dumb" terminal. A terminal with some sort of printing capabilities and a telecommunications device. You could probably buy something you could use for about \$500, which still may be too much for some libraries, but remember, this is the upscale of my alternatives, where they could, in essence, tap into that major database and do whatever kind of searching you wanted to do. Frankly, you could even do it with a patron there or you could, in many cases, teach the patron how to do the searching themselves. You could find out where materials were, not just at one of the three research centers, but also at any of the libraries that are connected to this database. You could find out whether it was actually available.

Some of the small libraries we're talking about I know are very rural, but I was also struck by the fact that some of the small libraries we're talking about are not rural and are not that far from other library sources. I think one of our problems right now is we do have people who may be mobile, who may work in another community or go to school in another community or shop in another community who don't know what's there, or who might go if they knew that that book was actually in. We talked yesterday about searching on call numbers. It's actually possible to browse some of the fiction, just as though you were standing by the shelves. Now, what you can't see are the pretty pictures and the fact that it has a big bright color cover. It's like reading a bibliography. It does give you an idea and of course, these things are actually available.

The second scenario: For the library that doesn't even have a terminal, it would be, frankly, much like what happens today in that you would have to have a library which actually did the searching for you. Whether you were in one of the libraries that had a telephone and you could telephone to a neighboring library which had a terminal or whether you actually had to send a written communication, not a formal ILL form, but a written communication saying, "I want the materials on this source."

I think the thing that it would do is right now, Monday when we were talking with the Automation Committee, there are a number of collections that in essence, are closed to the rest of the libraries in the state of Maine because we have no information available at a state level about what's in those collections. I think you've done a tremendous job in Maine of sharing the resources that are available at your larger centers, but we have a tier down from that where we have a lot of resources that aren't being shared to the extent that they might be and I think that's what it's going to do. It's going to open more titles, more copies, more things available and I think that's what happens to a library which is using this just for resource sharing.

Now it's also possible for a small library and quite frankly, the library that is open two hours a week is probably a candidate for no more than what I have just discussed, because the activities that are currently going on in that library are filling those two hours and even if you get more efficient, you're still going to be open those two hours, you're going to be there those two hours. You're busy shoveling the snow and sweeping the floor not to mention the port-a-potty, and the speeding up of check-in and check-out really doesn't do much for you. Sending out overdue notices a little faster. You may not even be sending out overdue notices at all. It may be a telephone call to somebody who keeps the book long overdue. In many of the communities we're talking about which have less than a thousand people, you may know everyone anyway and I don't think that we're really talking about

trying to make great clerical efficiencies in those libraries. But, I think the thing that we can do is open up the resources of more libraries in Maine. It may help you in decisions as to what you're going to purchase. Libraries in a geographic area, making decisions as to how they're going to purchase right now because you don't know what's in the individual libraries, you may buy more broadly in many more fields than you will later. Cooperative purchasing programs are very difficult to accomplish when you don't know what the actual resources are in another library. You can say this library's really strong in history, but you don't know if they've bought that title or not. We can do some of that.

For the very, very smallest library, as I say I think the thing that we're really going to do is to open up many more of the resources of Maine, but I don't think that it's going to do much for their internal use. Although, frankly, one of the things I've noticed is that we have a couple of libraries in the state that appear to be very active in certain seasons of the year and not so active in others. They may find that they can even their staffing out a little bit by using this certain months of the year as a circulation system for instance, to take care of those problems. That's about what I can say.

Audience:

I have one observation and one question. The observation is that I think in this whole process, we should still continue to be very aware, as I think we have been in the past, of various and sundry cooperative activities of that number of people probably approaching 200,000 who don't have an immediate municipal institution to which they can turn. Some of those people may have a school library in their community that may be able to offer them some sort of services, but I think that when we're talking about automation where things that were never possible or unthinkable before, may now be thinkable and possible and do-able, we ought to build into that consideration and that process, the idea that maybe some things are do-able for individuals in communities without libraries that were not do-able before. To what extent, how does that work with the Books By Mail program, and also how does that relate to the very small library that's open two hours a week that also has access to statewide programs for like the Books By Mail program and there are going to be some overlaps here that ought to be given explicit consideration I think.

The question I have relates to smaller libraries, particularly smaller school libraries, that may nevertheless have certain financial resources and be interested in certain computer systems, microcomputer-based systems, that may do what they want because they are small libraries and they have small collections and therefore their demands in terms of computer resource and

storage capacity, etc., are smaller. I'm thinking about not Overdue Writer, keeping track of what's out of the library while it's out and then it coming back again, so much, and I'm not thinking about the productivity software using the word processor, database manager, but rather things like the hard disk based, inventory-oriented circulation system, HighSmith as a well-publicized system, there are any number of others ranging in the 6-, 7-, 8-, \$10,000 range that is manageable or at least conceivable for some smaller libraries. What do you think is happening in that field? How do you think consideration of those systems might relate to the standards issues? You don't get a full MARC record in those systems by and large. Other ways to put books in them will allow you to do something else later on. In general, what is your reaction to these high-end microcomputer based systems?

Susan Epstein:

Well, actually, if I ever get it written, the next article I'll have in Library Journal will be about the small end of the turnkey business. The systems such as the one from Highsmith and Maxwell Library Systems and a few others. The article after that is going to be about the great, huge library systems that are out there. I think they do have a place in a statewide network. I think the thing that you have to realize if you look at one of those, in the scenario that I just painted where we're exchanging information about what is on the shelf, what is available, has another advantage to it. It's the thing I touched on yesterday when we talked about delinquent patrons - patron control, knowing that the patron you're loaning your books to is not ripping you off. Frankly, in a school library, because you have some other good coercion policies available to you, you don't have to quite as careful as you do, for instance, in a public library, because there are other methods of getting to those students.

The thing that I think is happening, I agree, there are some real standards problems in the micro-based systems, the hard disk systems are certainly beginning to store a lot more data than we've ever been able to before and we're getting closer, but almost all of them today are still single terminal systems. Single terminal, although you may think this is ludicrous if you're the only person sitting in your library, single terminal does by definition, have some limitations. It means that you can't use this as both a circulation system and an online catalog. Certainly not a public access, student access online catalog, because it means that you're going to have to keep this thing sitting on the desk. You check out a book, student says, "Do you have....." You say, "Just a minute." You swivel it around and they do their search. Meanwhile the person who wanted to check out the book is waiting. I think that, frankly, is one of the biggest drawbacks to the micro-based system today. It is not as capable of being turned into a real integrated system as

are the larger systems.

Now, computers themselves, are going to be able to handle all the applications, it's that physically we can't manage it. The other real limitation will be the MARC record. Now, one thing I can see happening would be the acquisition of, particularly as Karl said, one of the upper end systems. I agree, Overdue Writer, unless you have a tremendous problem in your school, is so much work to create the data, that it may not be worth writing in the first place. I know I'll have some people out there who are really using it. That is what we call an absence system. It only tells about those things that are not on the shelves. The systems we're talking about are full information systems. They tell about every book you own, at least every book you've put into the system so far. Once a book's in there, it's in there forever. In an absence system, such as Overdue Writer, you enter the fact that the book has gone out, the book comes back. You take it out of the system and when it goes out again, you put it back in the system. Some of the bigger systems, the Highsmith type of thing, you don't have to do that. However, one of the other problems is not only does it not have MARC, it has very, very limited access.

In February, I was visiting a library in Oregon which was using one of the new high-end, micro-based systems. They only access the book by the call number, the title and the year of publication. And that was all their record about that book carried. They were developing a circulation system. At the time, they thought that it was going to be quite valuable for the kinds of things they wanted to do. It would produce overdue notices, collect fines, and it would take care of delinquent patrons, but think how little that tells you about what you really have, particularly if you can't remember the first word of the title of the book. That's the only access point they have. You'll notice they didn't collect either ISBN's or LC card numbers. They don't have any way of upgrading that easily later on.

Well, in this particular case, they had been given the microcomputer and they had a really clever idea, which you might remember when you start doing conversion yourself, somebody had to key all this information into their system and they were doing it with volunteers. They bought a lot of paperback books to circulate. The volunteers got the first choice of which books they wanted to borrow, so if you came in and worked for an hour, you got some brand new paperbacks that had just entered this very small library and they were having no trouble keeping the volunteers going. So, it was a low cost project for them, but I really thought that it had a limited future and I think that's true of everything, very limited access points and little compatibility with any kinds of standards being done by other libraries.

On the other hand, particularly over the first several years of this project, what I can easily see is using one of those systems which would also have a telecommunications interface, doing your own internal operations in your own library on your own microcomputer, and also using it as a device to find out what might be in larger libraries across the state or in your area. But, your collection itself, would probably not be on the statewide system at that point. Then, as time passes, and we have some better ideas of what it really costs to maintain one of those large scale micro based systems, what it might cost to use the state system if we have some better state communications, better meaning cheaper state communications, then you may be able to make a switch. It doesn't take very many years of using a microcomputer to pay it off completely. I think there is room for both of those alternatives. Particularly in the first couple of years.

When I talked earlier about avoiding clustering and going into statewide automation, I was really talking about libraries which are good potential candidates for the statewide network in the first couple of tiers and not getting into this. An individual library going to do some of these things, on a very small scale basis, with a comparatively small amount of money. I don't think there's anything much wrong with that. Frankly, if your problems can be solved by one microcomputer with a comparatively small database, you're probably not going to be in the first tier of any statewide system that's going to come along. Yes, Karl?

Karl Beiser, (off mike):

????Can you say anything about the pace of change in the development of library oriented software for _____
_____ micros.

Susan Epstein:

He wants to know if I can say anything about the pace of change for libraries in the high capacity micros. Obviously it is moving very rapidly. I think we are beginning to finally see a conversion of the upper end, supermicro business and the very small, but it's interesting to me that there is virtually nothing on the market right now in the range of between 8, 9, \$10,000 and 60 to 80 or \$100,000, because the problem is that if you need a microcomputer that's big enough to cost \$60,000, you need enough terminals to bring the price up to \$80,000 or \$100,000. There really isn't anything in that field and we do still have a tremendous gap between the 20 megabyte hard disk drive and the standard for the upper scale systems, which have at least two-300 megabyte drives on them and that is a lot of data difference. On the other hand, I have to back to the fact that the very first automated circulation system I had had two 10 megabyte disk

drives on it and it was considered quite progressive at the time. We had 150,000 titles on it and we were doing a million in circulation a year on it with 16 terminals and all sorts of stuff.

So, I think that things are moving very rapidly, I think, as a matter of fact, I cannot name the name of the vendor right now. It is not anyone that anybody knows from the library business, but it is a name in the microcomputer field, contacted me last week, I was contacted both by the company and by an executive search service, which was hoping that I would have the name of somebody who could serve as their national sales manager for their new micro-based library integrated system. This is a company that has never done any work with libraries before and they've already sold three systems, but they haven't installed any so they figured that they ought to get a sales manager and a product manager very quickly. They have promised, in exchange for a few names I gave them, they have promised to keep in touch. I told them that I was very interested. They'd sold these to special libraries and I think from the names of the companies that they've sold these to, they've got to be upscale microcomputer and knowing the name of the company, these again are upscale systems.

I think what we are going to see is a lot of growth coming from the special libraries market which is going to force the use of that middle range of micros that are not being used now. Multiterminal use, micros that can be attached to local area networks that use various systems of one kind or another, because those special libraries often have the money. They have some very sophisticated needs, but their volume is not high, so they're ideal for some of the microcomputers and some of the more sophisticated microcomputers indeed. But, it is moving so rapidly. One, when I started doing some of the research for the article that I'm writing for Library Journal, one of the vendors that sent me some information, asked what my deadline was because they might want to send me an update in a couple of weeks of what was going to happen and I think we're going to see a lot of that. I think it is moving very rapidly, although I don't know if we'll ever fill in the gap between \$10,000 and \$60,000 because at the rate the prices of microcomputers is falling, what we may do is get more and more powerful systems and never get over the \$10,000 price.

(End of Tape)

Susan Epstein:

[In response to a question about non-resident use of libraries.]

It may be that you have patrons who live in a particular community, pay taxes there, and use the library there. They may also, however, shop in another community, they may work in a third and they may go to school in a fourth. They are contributing to the resources and the income in every one of those communities. To say that you are restricted in where you can borrow your books by where you live is not facing the realities of American life today. It's not facing even the economic realities.

Now, I know there is some strong fear on the part of a certain number of libraries, and with some good reason, that they will be raided by the neighboring town where the per capita support is something like twelve cents per person, whereas your per capita support may be twelve dollars and that is a very real problem, but I frankly don't think it is best addressed by imposing fees. I think it is best addressed by education to the patrons in the town with the twelve cents support, that this is what they're not getting. It is true, we probably will go through some real strong transition periods here where we have to protect some of the libraries that are being truly drained. But, I think that what you're going to find, at least what has been found elsewhere across the country, is that if really open, reciprocal borrowing occurs, it will be a lot flatter than you may think. I don't think that your fears will be quite realized. Obviously, I could be wrong, I haven't worked in a small Maine library, but I have been familiar with a lot of small libraries with varying support across the country.

I'm also aware that we have a problem here which does not exist in certain other states, in that you have some people who pay no taxes to support libraries at all. Not just a disparity, but no support. It is also true that some of the states I've worked at, because of some certain state laws, everybody has paid some level of support to some kind of library, because it's all been based on county systems. I think that things have to be worked out, but I think what they need to do is to be worked out with the understanding that they are an interim. We need to work on whatever inequities may occur, but they are only temporary. Gary mentioned something earlier today when he was talking about going back to the Legislature for funding to raise per capita support from the state level, the problem of going back and back and back. Well, I sort of see this as something very similar. He's talking about coming in with something that creates a formula. What I think I would like to see happen is to make some sort of commitment towards reciprocal borrowing, accept the fact that it may be several years down the road, and come in with some interim steps that are built into the same legislation. Then the issue

is settled and you're all able to work towards it with the realization that the fight will not occur again. I think it is a very divisive fight.

In the state of California, where indeed everybody does pay some library tax because of the strong county library system, reciprocal borrowing came in as a condition of participating in some other state funded programs. There had been a great deal of reciprocal borrowing already going on, but it had never been mandated from the state level before. We do not have one card as occurs in some other states. It's a very local thing. What I think was interesting was there were a couple of libraries that in the beginning were very vocal about the horrible things that it was going to do to them and how they weren't going to get into it and how over the years, the last six or eight years, they've just sort of quietly joined the program. They've never said anything. It doesn't hit the headlines. They just sort of did it because they found that there wasn't much benefit to being out of it. There are very few libraries that are being raided. Obviously, it's a very different situation than what occurs here in Maine, but I think that we're headed for it, because that's the way the American public is today. Very few of them are geographically in a position where they don't move from community to community. If you work in a community and shop in a community, aren't you helping to support that community one way or another and should you be restricted from using all services? Interesting point. I don't quite know where you're headed, but I happen to be in favor of reciprocal borrowing and I don't think it's quite as bad as some people may be afraid of.

Martha Pawle:

Some of you will have heard this before, but perhaps it should be a part of the record that I hope it will be possible for the State Library to reinstitute the per capita payment made by communities that do not have their own libraries. That was in effect for just one, beautiful year and the reason, in our case, that it makes such a difference, is that the town of North Yarmouth is adjacent to the town of Cumberland and they share a school system. The town of North Yarmouth has no public library. They have historically used the Prince Memorial library and in years past, way back in the '60's, paid a nonresident fee. When the original legislation regarding the per capita payment came through, the town fathers of North Yarmouth assigned their per capita to Cumberland, in return for which we extended free borrowing privileges to all of the residents of Cumberland. The money lasted for one year. We kept the free card for quite a while until the big budget crunches came in four years ago, at which point our town manager began to gaze upon this service with a very beady eye and went to North Yarmouth and was successful in achieving through their town meeting, a payment. The result of that is that we now get \$2,000 a year from the town of North

Yarmouth in return for which we provide free library services to that entire community which is a community of somewhere in the vicinity of 1,900 people. So it's not too far from \$10 a piece which is a fee that many libraries use. This ties into the reason why we were not able to support Maine Card which is what Ben Keating is talking about, because had we gone in with the Maine Card thing, we would have lost \$2,000 out of our budget right then and there. As soon as the word got back to the town of North Yarmouth that we had joined a program to provide reciprocal borrowing services and so forth, we would have lost that money which we really could not afford to lose, because we had a great many people using it. On the other hand, if we were able to collect the per capita, that would be a different story completely, so I do hope as you put this legislation together regarding per capita, that you try to put back in that assignment provision. It makes a big difference.

Gary Nichols:

Did you understand that, Sue?

Kathy Brown:

I'm Kathy Brown from Bates College. This whole issue of reciprocal borrowing, it is probably self evident that this is going to be a problem for the private colleges in the sense that politically, with our administration, it would be very difficult for us to go to our administration and say we're going to get involved with a system that every citizen in the state of Maine is going to be able to come to us and borrow our books, that won't fly. I can tell you that right now. I certainly can't speak in an official capacity for Bates, but from my point of view I would like to steer away from the idea of a monolithic system. I think, probably as far as Bates, Bowdoin, and Colby are concerned, it's going to be easier for us to sell our administrators on a Bates-Bowdoin-Colby link to University to Maine linked to whatever the public libraries comes up with. Sort of all tied together, but not all one big database for Maine.

Gary Nichols:

Any follow up on those comments by any other academic institutions? Brian.

(unintelligible exchange in audience)

Brain Damion:

Thank you Karl. My name is Brian Damion. I represent the Brunswick Public Library and middle-sized communities. I think that it's important to note for the record that libraries in this state that have a problem with reciprocal borrowing are the rule and not the exception. Yesterday, Ben Keating gave me a list of the libraries participating in Maine Card. How many public libraries do we have in this state? (off mike - Depends on how you count them, but let's say 212) Fifty-four are presently participating in Maine Card. How many academic libraries? (I'd say 15 or 16). Seven are in Maine Card. How many school libraries and media centers? (400? no about 200 and some) Twenty-one are participating in Maine Card. Looking at the list of public libraries, the exceptions include Portland, Lewiston, Auburn, Waterville, Biddeford, Saco, Westbrook, Sanford, Brunswick, Bath, Gardiner, Augusta, Rockland, South Portland and Scarborough. Looking at the post-secondary libraries, the exceptions include Bates, Bowdoin, Colby, UMO, USM, all of the other university campuses except Augusta, University of New England, and many others. We have got to deal with the problem of who pays for reciprocal borrowing and I think that this could be the time for the State Library to determine what kind of carrots have to be hung at the end of the stick to get people on the road to reciprocal borrowing. Thank you.

Gary Nichols:

Any comments?

Glenna Nowell (off mike):

I'm Glenna Nowell, Gardiner Public Library. We think of ourselves as a small library, but I didn't realize bathrooms were a criteria for that. We have three of them, no portable potties. I think Brian's right when he talks about the reciprocal borrowing. It's not in many cases that librarian's don't want to do it or even that we're afraid of being raided. What it is is that those of us who are departments of the city have a city council and a city manager that say, under no conditions are you going to do that, unless you're reimbursed for it. More than a sixth of Gardiner's budget comes from outside sources. People from the surrounding communities that either buy a card at a twelve dollar subscription rate or towns that pay in. We have two towns paying in. One at \$4,100 and another at \$3,900. That totals up to a good portion of our budget, so there's no way that the authority in the town is going to do away with that funding. Even though that really doesn't show on my budget balance sheet. That's money that goes into the general fund and they're just not going to do away with that unless there's some reimbursement coming in for that.

Steve Hilyard:

Since we're seeking to clarify the record about the Maine Card, I think the reservations that some of the University of Maine campuses had was not reciprocal borrowing nor reimbursement. In fact, our argument was that the Maine Card was functionally irrelevant to us because we're open to any resident in the state of Maine, therefore, people could come along under any circumstances. The difficulty that we ran into was being asked to keep the statistics that Ben asked us to keep. The University of Maine libraries are open, Maine Cards not necessary.

Off mike, unintelligible:

... _____ small fee.

?It's not so small.

It depends on the local campuses. I can't speak for

Different speaker, off mike:

Orono is three dollars and Cumberland is five. _____

Gary Nichols:

Barbara, please.

Off mike:

_____ we do honor the Maine Card and do have three towns that make a contribution to us for free use of the library. One contributes \$500. Now if I understood it, in order to get a Maine Card, you had to belong to a library. These people have to belong to some library somewhere. These people have no library at all, so _____ although we honor the Maine Card, they don't _____ . They don't own one.

Gary Nichols:

Good point. Well, we struck a hot topic here. We're going to have a report on the Maine Card, how to automate the procedure. Any more comments on the Maine Card. Then we can proceed to some

other comments. I can see that you're all getting a little tired, but I know some of you still have something to say. No?

Pat Fowler:

I'm Pat Fowler from Witherly Library, the Small Public Libraries representative on the Automation Committee. Fortunately, most of what I wanted to say relating to small public libraries has been said and I think said fairly effectively by other small public librarians. One minor thing that did catch my attention, two people, one of them being Gary, made the statement that small public libraries don't want to be left out of this. I don't agree with that statement. My concern is not with being left out, it's with knowing what our objectives of library service and how automation can relate to them. I think this is something that we as small public librarians need to address and that the report itself, I'm sure, will address. We need to know what our own individual objectives of participation in automation are. We've mentioned a number of them, one of them being interlibrary loan. We've talked about how small public libraries might participate and some of those questions relate to funding, which certainly varies from community to community and might be something the state would want to look at.

We also have a situation among small libraries that there are some who cooperate and some who don't based on a number of things, size of community perhaps being one of them. That opens the question of whether there should be any advocacy to encourage the support of those who don't participate in such a system, which again opens another question of how much time the state system is putting into all this. Should there be more consultancy in the area of automation at the State Library and I suspect that may be something that Susan will be addressing, too. My concern as I've expressed in other situations is that we not eliminate important areas of consultancy that we already have as small public libraries and which I think are extremely important, where we have very little professional expertise in these small library units. We need it from the state in terms of many service areas, not just automation.

Someone mentioned training time and the kind of materials, the kind of hardware and programs that we might be working with in small public libraries. Certainly the staff of such units are, at best, underpaid, possibly even volunteer and their backgrounds represent the widest range of experience and training. We need something that we can get into with a minimum of training if it's to work for us.

One point that we did talk about as a point of contact for small libraries was interlibrary loan. I'd like to raise a couple of questions that I have with the current interlibrary loan system as just examples of kinds of questions that maybe automation

could address, maybe not. I don't intend it to be exhaustive and I don't intend it in any way to be a criticism of the present system, which is our life's blood. For example, there's no way, as I understand it, in the system which we tap into to stop a reserve which is no longer needed. When we deal with students or when we deal with seasonal population, this means that we often get material after we no longer have a patron who needs that material and it's expensive to the system to have it pulled out and sent to us if that's the case. I wonder if there isn't another way to do it. It would make a difference to my acquisition decision if I knew whether or not the ARRC were going to acquire a specific title. If this is something that isn't going to be available to us elsewhere, then perhaps I should consider buying it.

It would make a difference to me too, to know what the level of reserves was. If this is a very popular item, then perhaps I shouldn't be expecting someone to provide it for me, I should provide it for my own patrons, and I can't always predict that ahead of time. When a book is in circulation at an ARRC center, and you're talking about tapping into a circulation system directly would solve that problem, if a book is in circulation, I have no idea how long it will take to get to me if a reserve is put on it. It could well be lost, in which case we will never see it, but we still have a pending reserve and hesitate to go elsewhere to even try to.

Also, if there would be any possible provision for a two-way information system for a reference interview as part of the interlibrary loan setup. This is probably pie-in-the-sky, but wouldn't it be wonderful. So, those kinds of things are just some individual concerns.

Susan Epstein:

Interestingly enough, should we ever be able to do the kinds of things we're talking about and we are able to have small libraries tap into an integrated system that is used by other libraries, it will be possible, it is currently being done in hundreds of libraries today, to stop a request that is no longer wanted, to know what the ARRC is buying and, indeed, what every other library whose online database is there. You don't know it from the glimmer in the eye, but you do know it from the time they placed the order. You would know exactly what the level of reserves was on there. You'd know how many copies there were and how many reserves there were, which would give you a way to tell whether your patron is going to get it before the snow flies or whether you should buy it yourself. And, of course, you will know whether it's circulating or available.

The one that's not even terribly pie-in-the-sky but is a little less common today, has to do with the two way conversation. At

the moment, we can't do anything voice-grade on the integrated system, but we can send electronic messages back and forth and conduct interviews right there in real time with your people. It is still pie in the sky, because we don't have any money, but as far as again, the technology, it's already done. It falls into many of the things that we're talking about doing today, things that are, quite frankly, difficult to do manually and things that are difficult to communicate back to you. I think that that's the interesting thing.

One of the things that I have done in some of my writing about cooperative borrowing, interlibrary loan in particular, is that at the moment, and I want to take the question of funding out of it, because there is reimbursement now and you can say, well, because they are being reimbursed, they should do it, but let's take that out of it. At the moment, the way your system is set up, most of the work is involved by the library which owns the book and is being asked to lend it. And, despite the money coming in, I think there's somewhat of a natural reluctance under those circumstances. You're asking them to do the work and they've bought the resources. When you use automation, it is possible for you to put more of the work of actually acquiring the material back on the library that wants it, reducing the burden on the library that owns it, because you're the one that first of all finds out who has it, whether it's in circulation. You can actually place the reserve yourself. You can cancel it when the book is no longer needed. You can go in and when you go to place the reserve and it comes up and it says there are 528 reserves for this one copy of the book, you can decide not to do it and never get the lending center involved at all.

Basically, and again, not any individual lending center or any funding under consideration, but just generally, the more work you put back on the library that wants the book, the more interlibrary loan you will have, the more pleasant everybody will be to each other and frankly, the better service you're going to give to your patrons because you're the one who's doing the following through. There's none of this, well, the ARRC center didn't do it well or I sent it off to the University of Maine, it must have been lost. You're the one who took care of it, and you're the one who's dealing directly with the patron. There is another one that the librarians in Colorado have talked to me about and that is when they have to do the work to institute the interlibrary loan, they sometimes look a little further in their collection to find an alternate source.

Gary Nichols:

There's one comment that I would like to solicit that was expressed in another forum, but perhaps we'd like to hear it here and that's the concern about a medium sized library like Auburn. Nan! Well, I think on the Automation Committee you had expressed

some concerns about the relevancy of looking at medium sized collections in terms of building a resource pool. If you have anything you'd like to say in that regard, I think we'd appreciate hearing it.

Nann Hilyard:

I would like to add my two cents about the Maine Card. My objection was not against the concept of resource sharing, because as I'm about to say, I think that's extremely important. Nor was it about the paperwork. Mostly, I was concerned that there was no provision made for overdue retrieval. If you have somebody from 50 miles away who has one of your books and is not returning it, was the state of Maine going to pay my staff to go 50 miles to get the book from that guy's house. All I could see was somebody with less than honest purposes going from library to library throughout the state and coming up with a terrific collection in his den and not really our having the legal power to retrieve those materials. However, given the state of overdue retrieval services that the Mid-Androscoggin County Public Libraries are now anticipating, we're hoping that perhaps we can have something on the state level that'll give us a little more clout as far as retrieving overdue materials and maybe they'll have to build an extra wing onto Thomaston just for those offenders, but at least they'll be literate! Ruth, you have some to send up there, too, don't you.

The thing that I look forward to the most with a statewide automation system is the opportunity to share resources. I think that among the medium sized public libraries in the state we have a wealth of collections. Our combined acquisitions budgets would rival those of the combined acquisition budgets of the three larger public libraries in the state and I think we have a breadth of interest among the people who are doing the acquisitions and the patrons for whom we are acquiring those materials, that we would find relatively little duplication, particularly among nonfiction titles. As you know there are very frequently several choices you can make for a book you want to buy on any one subject and the likelihood of my buying that book for Auburn and Rick buying that book for Lewiston and Brian buying that book for Brunswick, we may end up with three separate titles which would be very advantageous to our patrons who would want everything there was on that subject. On the other hand, in the area of fiction, I think that to have a pooled list of all of the copies of Stephen King books in existence in the state of Maine would be extremely handy, because we have patrons who know where those books are supposed to be on the shelf and they never are there, because everybody had those checked out all the time. So, basically, the best thing I can see is resource sharing because it is not doing anybody any good if it is sitting on the shelf in the Auburn Public Library. I don't care if it's a person from Auburn who has it out or somewhere else. I want it

being used by someone who will get the best good out of it and that's what I hope the system will help us do.

Gary Nichols:

O.K., Nancy.

Nancy Bell?:

I was sitting here, and I thought of this earlier, but I didn't want to say this until now and it seems like a good time to do it. "How much information will we need?" was a question that I was asked to come up to Maine and check in on about five or six years ago. How much information will a small library or the school library need? What will be the objectives of this state automation system? What do the future citizens of America, the teenagers, how much information should we make available to them? How much information do they want to have made available to them and what are the objectives? Maybe they should come from the National Education Association or MTA for school libraries, what are the objectives? How much information do we need and could that be addressed in this report?

Off mike:

Could you clarify, what do you mean?

Nancy?:

How much information does a high school student need?

Off mike:

On what?

Nancy?:

When he's doing a research paper or how much information does he want access to or should he have access to or should we make him aware of the amount of information we have in this nation.

Off mike:

Are you talking censorship?

Nancy?:

No, absolutely not, I wasn't even thinking of that.

Off mike:

Sounds like the other side of the coin.

Nancy?:

Well, the question that came to me and it came from FEDLINK, Federal Library Committee at that time was, how much information do people want, do they need? We have so many federal documents here and, of course, a lot of them are just being thrown away because nobody's reading them. How much information do we need or do we have too much of an information explosion to the point of there's more than we need?

Karl? Off mike, unintelligible:

_____ I don't think it's ever a question of how much information people need. What people need and want to try to get through libraries is the right information and that's a qualitative judgment, _____ qualitative question and answers. I mean it's beyond all possible quantification. We need the best possible services that we can afford to provide the access to the most possible resources with the greatest diversity. (Access points) _____ all of them that we can afford. The other thing is that there is an information explosion, somebody else who's name escapes me coined the term information controllability explosion. There is that. We are able to control access to far more information, that is, make far more information accessible now than we ever used to because of the new technology that we're talking about and I wonder if maybe the concern over the vastness of information, trying to categorize it and channel it may be a little bit, getting a little bit dated, because we do have ways of seeking out pins and needles in the midst of enormous haystacks. _____ it's better sorting mechanisms is what we ought to be concerned with rather than keeping the haystacks small.

Nancy?:

Well, that's a good answer, but I do think that it should be addressed in the report, just exactly what the objectives are going to be for school libraries, for small public libraries and the kind of service we want for them.

Susan Epstein:

It will not be addressed in the report I am going to write. I really think that is well beyond the scope. I think that your comment was very well taken. It's part of the whole purpose of not only libraries, but anybody who provides information. I think Karl made some very good points, that the thing that we need to do is get more information under control and to let people know that there are access points to it. One of those points being libraries. I was appalled a couple of years ago to read a Gallup Poll study that was commissioned by the New Jersey State Library or the New Jersey Library Association, frankly, I can't remember which, that talked to the citizens of New Jersey about the services offered by their libraries and only 10% of them realized that any public libraries ever circulated records and yet that is a very common service offered by libraries. Fifty percent of them didn't know that libraries offered reference service. This is an incredible problem.

I think the other problem is what information do you put where and at what level and how do you get it in becomes even more difficult when you get into the whole question of, isn't learning, a lot of it, serendipity. The bringing together the pieces of information that previously were never connected. The person who is almost always, and at least in scientific disciplines, which I know a little bit, the person who is at the forefront, is often the one who connects two pieces of information that no one has ever connected before.

In a recent issue of The New Yorker there is a story about two gentlemen who received a Nobel prize while working at the Bell Labs, working on quasars. The interesting thing about it is that much of what they built their knowledge upon and of course, they, in their very modest way, downgraded their own role, but so much of it was built on information that had already been out there. Some of the information that they built their information on had been around for sixty years and no one had ever thought of this aspect before. I've been told by people in the medical profession that the best and most brilliant diagnosticians are really not that much brighter or that much more knowledgeable than anybody else in the medical profession. It's that they're always able to think of another alternative and to pull another piece of information together.

One of the things that makes the use of online databases so very exciting is that ability to start pulling concepts together that we have never been able to pull together. I frankly think, first of all, although this is outside the scope of my charge considerably, I really think I agree with Karl, the more information, the better access we can provide at any level and I really think that the concept of school library, public library, academic library, even special library, is only the place you go for the first source and that one of the things that should be

included in all of our training as librarians, is how to tap into other sources. The woman earlier who described her honors student who's sitting there writing a computer program that's going to help her automate her library, should that student be restricted in his information about computers to that which we decide is the average level of information that needs to be known by the average twelfth grader. I doubt it.

Nancy?:

I don't think that was the question. How many databases should a school system be willing to pay into, then expect the big libraries or maybe the regional libraries take over after that? I mean, how much information do we need to have on our terminal or like the BRS or DIALOG. How much of that should we have and to what extent? Does that clarify it a little? I think that's what I mean, that's controlled information.

Gary Nichols:

I hate to put any individuals on the spot, although I love in particular putting one individual on the spot any time I can and that's Mr. Woodward down here on the end. Bob, you've heard a lot of comments here today. Are there any comments you'd like to make, although I understand you're going to submit something to us in writing. Is there anything in particular you'd like to say?

Bob Woodward:

You're embarrassing me. Our present regional library system is now about fourteen years old. We started in 1969 to come up with some kind of plan to widen and improve library services in the state of Maine and we developed innocently and instinctively a plan that's worked very well. We've got now one of nine statewide programs that is a multitype program. The school libraries, as Gary pointed out, were involved from day one. There are only nine states in the country where the school libraries, the public libraries, and the college libraries are all integrated at the present level that we're talking about, a non-automated level. We, this is the Maine Library Advisory Committee that developed the legislation. We innocently, on the basis of public opinion surveys, assumed that very quickly we would have some kind of statewide reciprocal borrowing. We were wrong on that one. We still get all sorts of very good reasons from very many libraries, very different reasons sometimes, why a particular library can't do it. Still think it's, I agree with you, it's important and I think that we'll find a way to meet the objections of many libraries.

This is an observation, but one of the arguments that I see for

automation in this state, that I hadn't thought of before comes from the point that Nan brought up about the middle level libraries that want to get involved in resource sharing because they've got important resources. That's great. The thing that intrigues me is that it's the middle level libraries that historically in this state have not made use of our present interlibrary loan system to the level that you might expect. It's interesting that they will probably, as a result of automation, become involved to the extent that their own patrons will get a level of service that they didn't or don't now receive because if you look at interlibrary loan statistics in this state, it's the middle level libraries that make less use on a per capita basis of interlibrary loan than the Witherly library in Castine that is a very heavy user of the Bangor library or the Portland library, both of whom are very heavy borrowers of interlibrary loan materials. So, it's an interesting point that it may be automation that will bring the middle level libraries that heretofore have not made heavy use of the interlibrary loan system for their own patrons, they will now do it because they will be altruistically involved with the patrons from down across the river.

I hope in your report or in the preliminaries you have some kind of statistical information for us. What is the level of interlibrary loan activity of, for instance, Wisconsin, now that they have some kind of statewide automation, California and so forth. You may have resources that we don't have because, I can tell you that Dan and I over the years tried time and again to find out what's happening and we know what the inputs are but we don't know the outputs in some of these states. So, you asked for my comment. I can't tell you how good it is now to look back fifteen years, where we started, stone cold and we did very well in developing a regional library systems act. It's worked very well. Now, it's great to be in on this new threshold.

Gary Nichols:

Thank you, Bob. That's precisely the reason I asked you because you've been so involved since the very beginning of this effort in the past fourteen or fifteen years. Any other comments that you would wish to express this morning? I don't want to cut short any opportunities that you have, one of the few that you have to express yourself on this topic. Anybody else? Thank you, Ruth.

Ruth Rothman:

Just very quickly. Ed Chenevert would be here if he did not have a trustees' meeting, however, he does and he will be submitting written testimony and what I want to say is not official, despite my feeling. I have been listening to the discussion of

reciprocal borrowing and it seems to me that a very wide level of joint automation will take care of a good many of the problems, of the reservations, that people have had with reciprocal borrowing, especially since I am in Circulation, some common database of problem patrons that we can share perhaps. Other than that, something that I mentioned on Monday that I know I can safely say comes from Ed as well, for those of you who may not know that we are at a stage now where if we expand our automation, this whole study comes at a good time, because our system at this point cannot take any more expansion and so when we go ahead, we will in essence, be starting from scratch and therefore really have no commitment to any particular vendor and this is simply a good time for us as well as for, I think, the state.

Audience, off mike:

What would be a scheme, a diagrammatical scheme of the vendors and the services and all that?

Gary Nichols:

Will you provide a diagrammatical scheme of the vendors...

(off mike, unintelligible)

Susan Epstein:

I will deal with how it will be used by different libraries in the state. I will not provide a diagram of the services provided by each vendor and that's going to be very deliberate. What I have found is that any attempt to reduce it to one, two, three pages blurs any of the distinctions between the various vendors and frankly, it's not pertinent at this point, because the procedure, should you decide to actually purchase a system, requires an extraordinarily detailed, probably in your case running to over one hundred pages, Request for Proposal which requires a vendor response that is measured by the inch if not the foot. To say that this vendor has a circulation module or a serials control module or a public access module is absolutely meaningless in trying to compare one vendor to another. If we're talking about something that can be fit on a couple of pages, that's the problem with it. The other thing is that we still have to get money. At the rate this field is moving, there are a number of vendors today who might or might not be able to take care your needs. By the time you actually have the money and are ready to sit and write specifications to exactly what you want, that group of vendors will have changed. It may have expanded, it may have contracted... (End of side one, turned tape over)

I've seen something that sounds like what you're talking about, that compares circulation systems. It runs on for about ten pages just dealing with circulation functions and it only deals with about ten of the twenty vendors out there, and I still find it to be extraordinarily inadequate for doing any kind of decision making. All it does is give you some vague ideas. So, no, I won't be talking about that. What I probably will discuss is some of the things that the vendors will be telling me in my site visits to the vendors about the kinds of concepts they're headed for. One vendor, for instance, I've already talked to, is talking about providing computers at sites that are actually run and operated by the vendor at centralized locations where you buy your terminals and hook in. Because they have a connection with a nationwide, value-added network, they're going to be able to do this. This is still in the planning stage. They're about to sign a contract with a consortium of libraries. If they do, it will be open to lots of other libraries. That's not necessarily a solution for you, but that's the kind of thing that I will be talking about. There are a couple of other vendors who are looking at some very interesting linking mechanisms. So, I would be talking about those. Not about the features of their systems, but the kind of things that are particularly pertinent to a statewide automation program. It is doubtful that anything I say will make the decision of the University of Maine, which has not yet picked a vendor, any easier.

Gary Nichols:

I have a sense that we've just about run out of comments. Is there any other?

Unidentified, off mike:

I'd like to say thank you to Susan for doing a marvelous job.

(Applause)

Gary Nichols:

Thank you all for taking your valuable time to come here for two days now and for your input. If you have any further comments, please don't stop here. If you have comments you can, of course send them to the State Library. We'll be sure that it gets to you, Susan, but maybe you want to give an address that people can write to, too.

Susan Epstein:

Send it to me at 1992 Lemnos Drive, Costa Mesa, CA 92626. If any

of you would ever like to talk to me, I'm very rarely home, but I do pick up my messages at least twice a day and I do have an answering box on my machine (714) 754-1559. But, I really would welcome any kind of written communication with you. It has been a pleasure being with you the last couple of days. I'm really looking forward to October, except I think we may be on a death march by the end of the week because of the number of places we're going to try to go, but, they've been promising me these great adventures. There is nothing that tops transColorado. Yes, because TransColorado added the Rockies to their adventure. I would like to hear from you, particularly anything you think of later. I know that you probably have the same tendency that I do. You're going to think of the perfect comment somewhere about an hour's drive from here. Please write. Those of you who do submit what appears to be formal testimony, will have it included in one of my reports, but it isn't necessary if you don't wish to get yourself down on record and really you're just trying to call something to my attention. Some of the things that I've heard today is people saying, "I hope you don't forget to ..." I'd sure like to know about those now rather than after I write the draft or worse yet, after it's all finished and I hear one of you at something like a regional meeting or at ALA say, "You know that would have been a great report except that she never mentioned and I'd been expecting all along that she would." Thanks a lot.

Gary Nichols:

Thank you all again and for sharing your comments with us.

End of taping